The Incentives Behind Clearinghouse Requirements

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November 23, 2015

Abstract

We analyze a clearinghouse's incentives behind setting transaction fees and collateral requirements. The clearinghouse's requirements affect not only the size and riskiness of her participating client base, but also the transaction fees charged to clients by her clearing member. We characterize the equilibrium collateral levels and find that they depend on the riskiness of the contract and the costliness of operating a client clearing business, relative to the depth of clients' private trading benefits. We show that the clearinghouse imposes a very low collateral requirement when the contract is not risky and the operational cost of client clearing is low, while a high requirement prevails if the contract is risky and client clearing costly.

1 Introduction

Clearinghouses operate in a highly regulated environment. Collateral requirements are subject to regulatory approval, and are critically reviewed, since collateral is viewed as the first line of protection for the systemically important clearinghouse in the event of a client default.[1]

This does not, however, take away entirely the freedom of the clearinghouse to choose her preferred collateralization rules. Regulators often require portfolios to be "fully collateralized," which effectively creates a floor on the level of collateral a clearinghouse can demand. Since collateral, essentially a contingent claim that pays off only when there is a default, protects clearinghouses from counterparty risk, one may argue that it may be incentive compatible for the clearinghouse to impose even higher requirements. Regulatory authorities thus need to understand the incentives of the clearinghouse, so to design policies that align the interests of the clearinghouse with those of the regulator.

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†Department of Industrial Engineering and Operations Research, Columbia University, New York, NY 10027, USA, wc2232@columbia.edu This material is based upon work supported by the National Science Foundation Graduate Research Fellowship under Grant No. DGE-11-44155. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

[1] In the U.S., derivatives clearing organizations' collateralization rules require approval from either the Securities and Exchange Commission or the Commodity Futures Trading Commission, or both, depending on the nature of the derivative involved.