



Central counterparty capitalization and misaligned incentives



BIS Working Papers | No 767 | 11 February 2019

by Wenqian Huang

PDF full text (480kb) | 61 pages

Summary

Focus

This paper investigates for-profit central counterparties (CCPs), asking whether their incentives might undermine financial stability. Such CCPs choose how much capital to hold, and set the collateral requirement for their clearing members, so as to maximise their own profits. They face a trade-off between fee income and counterparty credit risk. But a CCP's limited liability creates a misalignment between its choices and the socially optimal solution to this trade-off. In studying the factors that give rise to this misalignment, the paper derives the optimal capital regulations and examines the significant role of CCP ownership structures in safeguarding financial stability.

Contribution

From a theoretical viewpoint, this is the first paper in the literature to argue that a for-profit CCP would seek to hold less capital than is optimal from a social welfare perspective and, similarly, would require less collateral from its members than is optimal, thus undermining financial stability. From an empirical angle, this paper also provides the first evidence of a relationship between the capital held by CCPs and the collateral they require.

Findings

The model developed in this paper implies that better-capitalised CCPs set higher collateral requirements. Empirical evidence suggests that a 1% increase in a for-profit CCP's capital is associated with a 0.6% increase in its members' collateral.

Another implication, again deriving from its capitalisation and collateral choices, is that a for-profit CCP is more likely to fail than is socially optimal. By contrast, a user-owned CCP chooses to hold more capital and is therefore less likely to fail. Indeed, the data show that user-owned CCPs hold significantly more capital, on average, than for-profit CCPs do.

Optimal capital requirements are derived for different levels of the clearing fees charged by for-profit CCPs. When this fee is low, the capital requirements incentivise CCPs to demand more collateral, thus bolstering financial stability. When fees are high, capital requirements do not change a CCP's incentives but serve to boost its loss-absorbing capacity.

Abstract

Financial stability depends on the effective regulation of central counterparties (CCPs), which must take account of the incentives that drive CCP behavior. This paper studies the incentives of a for-profit CCP with limited liability. It faces a trade-off between fee income and counterparty credit risk. A better-capitalized CCP sets a higher collateral requirement to reduce potential default losses, even though it forgoes fee income by deterring potential traders. I show empirically that a 1% increase in CCP capital is associated with a 0.6% increase in required collateral. Limited liability, however, creates a wedge between its capital and collateral policy and the socially optimal solution to this trade-off. The optimal capital requirements should account for clearing fees.

JEL classification: G01, G12, G21, G22

Keywords: central counterparties (CCPs), capital requirement, financial stability

About the author



Wenqian Huang

[More from this author](#)