Netting Relationships and Credit Exposures in Payments Systems

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Abstract

We develop an empirical methodology to characterize intraday netting relationships and assess their effect on credit exposures, collateral requirements, and the expected shortfall of operational disruptions. Our methodology is developed in the context of an interbank payment system, which allows us to jointly assess critical features of the financial system that are usually analysed in isolation. We use data from the Canadian Large Value Transfer System (LVTS) and take advantage of its peculiar configuration to gain insights into market participants' preferences between survivor-pay and defaulter-pay arrangements that mimic traditional collateral and capital requirements used extensively in the financial system and in the banking literature. Our results show that netting relationships are determined by the ability of market participants to coordinate the issuance of new credit obligations. Coordination increases when participants are not constrained to issue new obligations. When some participants are constrained, the netting capacity of the entire market decreases. We conclude that operational or market-based disruptions to the marginal netting process could restrict the flow of credit obligations and compromise the ability of a central counterparty to manage credit risks efficiently.

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