

Compressing Over-the-Counter Markets

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We study how the size of over-the-counter (OTC) markets can be reduced while satisfying individual net positions and trading relationships. First, we find that the networked nature of these markets generates an excess of notional obligations between the aggregate gross amount and the minimum amount required to satisfy each individual net position. Second, we show conditions under which such excess can be removed using portfolio compression, a recently introduced multilateral netting operation that identifies and tears down redundant trades. We study feasibility, efficiency criteria and topological characteristics of compression, highlighting the key role of intermediaries for excess levels and compression efficiency. We show that a trade-off exists between the amount of notional that can be eliminated from the system and the conservation of original trading relationships. Third, we apply our framework to a unique and comprehensive transaction-level dataset on OTC derivatives including all firms based in the European Union. On average, we find that around 75% of market gross notional is eligible for compression. Next, we quantify the efficiency of several benchmark compression approaches differing in their scope and impact on the web of contracts. In particular, we find that the most conservative multilateral compression which satisfies original trading relationships removes on average more than 85% of excess in the markets. The results of this paper are particularly relevant in the current regulatory debates regarding macroprudential initiatives on improving banks capital buffers and risk management.

This is joint work with Marco D'Errico (Dept. Banking and Finance, University of Zurich & European Systemic Risk Board).

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