Title: Residual Risks and Default Waterfalls in Central Counterparties

ABSTRACT: I develop a methodology to assess residual risk exposures in derivatives central counterparties (CCPs) relative to the coverage suggested in the CPSS-IOSCO Principles for Financial Market Infrastructures. These risk exposures can be used to evaluate the systemic risk contributions of CCPs and the effectiveness of regulations mandating central clearing. The proposed technique decomposes residual risk exposures into a quantity-based component, driven by individual trading decisions that lead to crowded trades, and more traditional price-based components, determined by the volatility and comovement of asset returns. Empirical results based on data from the Canadian Derivatives Clearing Corporation (CDCC) show that aggregate residual risk exposures reached record levels during the financial crisis, when price-based components were at their highest levels. However, the quantity-based component peaked six months prior to the crisis; thus, suggesting that trade crowdedness could serve as a leading indicator of the financial cycle and should be considered when designing risk management policies.