Title: Cournot model of brokered FX trading

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Abstract:

This paper develops a Cournot model of rival dealers placing limit orders with a broker, who in turn makes a market by acting as a liaison between dealers. The broker's limit-book lists the various prices and quantities at which dealers are willing to exchange currency vis-à-vis electronic broking. The size and volatility of the inside spread is simulated relative to dealer entry–exit and the price elasticity of linear order arrival functions. Our simulations reveal non-linear price dynamics from dealer participation in market development, with an additional rival narrowing the inside spread by 1.82% while diminishing its volatility. These findings may shed some light on the "excess volatility puzzle" raised by Killeen, Lyons and Moore (forthcoming) as to why price behavior under flexible exchange rate regimes is significantly more volatile than macro fundamentals would suggest.