

Equilibrium Price Schedules in Limit Order Markets*

Austin Gerig[†]

School of Finance and Economics
University of Technology, Sydney
austin.gerig@uts.edu.au

Kristoffer Glover

School of Finance and Economics
University of Technology, Sydney
kristoffer.glover@uts.edu.au

January 2011

Equilibrium price schedules in limit order markets have recently come under attack from two directions. First, empirically there are not enough limit orders in the book so that schedules appear much steeper than would be expected in a competitive equilibrium. Second, when markets exhibit strict adverse selection, then no symmetric Nash equilibrium in price schedules exists so that transaction costs are infinite. In this paper, we rescue price schedules from both attacks. We show that the no-equilibrium result is avoided rather simply by market order submitters who split their orders into small pieces that are transacted one at a time. This forces liquidity providers to Bertrand compete for each piece of the order and produces the competitive result. Furthermore, by using brokerage identifiers for transactions on the London Stock Exchange, we show that when the splitting of orders is accounted for, that dynamically constructed price schedules are indeed in equilibrium.

Keywords: break-even conditions; market impact; price impact; price schedules; tail expectations.

JEL Classification: G19.

*We thank ...

[†]Corresponding author.