

Distribution of upstairs and downstairs trading
by Seppo Ikäheimo (Helsinki School of Economics) and
Tomi Seppälä (Turku School of Economics)

The purpose of this paper is to analyse and explain differences between the statistical properties of in-house and cross-broker trading. In-house trades are trades where the same brokerage stands at both sides of the transactions. These kind of studies have been rare since the public U.S. databases do not offer information on selling and the buying broker of a specific trade. This study uses data from Helsinki Stock Exchange (HEX), where information on each trade must consist of the exact time of the trade, the quantity of shares and the name of both the selling and the buying broker.

Booth et al. (1998) found that upstairs trades in HEX are more likely to be in-house trades. Upstairs trades do not enter the electronic downstairs market but are negotiated between the brokers representing buyers and sellers. Booth et al. suggested that price discovery occurs in the downstairs market whereas upstairs trades have lower price impact, supporting Seppi's (1990) hypothesis that informed traders are likely to trade downstairs - as well as Grossman's (1992) hypothesis of smaller total price effect for upstairs trades compared to downstairs trades. They also found that brokers tend to use the downstairs price as the basis for pricing upstairs trades and that the percentage of trades processed upstairs is lowest for the medium size trades supporting the stealth trading hypothesis by Barclay and Warner (1993). According to a recent paper by Grinblatt and Keloharju (2000) small shareholders exhibit inferior performance even after controlling the impact of their contrarian behaviour. This indicates that small shareholders do not get the best price at the market.

In our study trades are classified into two groups: in-house trades and cross-broker trades. Sophisticated investors reveal information through trading activities (simultaneously trying to hide information), and according to earlier studies, such trades take place in the downstairs market. Thus downstairs trades create certain patterns within the daily bid-ask spread. The upstairs trades, which are more likely to be uninformed trades, do not create such a clear pattern. As a consequence, variability of trading prices between upstairs and downstairs trades may differ. If the information-based variability is high, we expect to find higher variability of intraday stock price in the downstairs market than in the upstairs market. This would also lead us to expect higher variability in cross-broker trades compared to in-house trades. If the contrary is found, one possible explanation may be the cheating behaviour of brokers.

Our empirical part reports results from the time period of 1994-1998 in HEX, and the data is analysed according to the type of shares, according to brokers and year. Our analysis is based on a probabilistic model for the trading behaviour which we test using various statistical measures of the distribution of intraday prices in the in-house trades and cross-broker trades.

Contact address:

Seppo Ikäheimo

Helsinki School of Economics and Business Administration

FIN – 00101 Helsinki

Finland

email: ikaheimo@hkkk.fi

tel. + 358 50 505 4990