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Miscellany

Volume Discovery: Leveraging Liquidity in the Depth of an Order Driven Market

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Abstract

Electronic order book trading has evolved in being recognized as the best-practice for trading small and mid-sized orders. Yet, this mechanism does not properly address the needs of [...]e-counter markets [...] quantity discover[...] in adversely impacts [...]

We pr[...]' introduces the r[...]ook. The volume [...] parameters 'hidden [...] depth for matchin[...]

For large[...]enefit block trading by increased likelihood of execution and reduced opportunity costs. For all

orders, Volume Discovery promotes the integration of OTC markets and order book trading in order to improve liquidity while protecting price/time priority.

Keywords: quantity discovery block trading market microstructure order book iceberg orders OTC

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Notes

1. As Nasdaq was traditionally a dealer market, dealers' quotes along with their identities were displayed on Nasdaq screens. Execution was not automated, trades had to be executed on the telephone (with some exceptions provided by the SelectNet order routing system or SuperSOES, the small order execution system). As Nasdaq introduced the hybrid trading system SuperMontage (which combined an electronic order book with dealers providing quotes) in October 2002, the display of dealers' identities was not compulsory from a market model perspective, as SuperMontage provided for automated matching. Anecdotal evidence indicates that dealers understand the identity display as prestigious as it offers them an opportunity to show the qual [illegible] asdaq enables [illegible] tifier ‘SIZE’ is displaye [illegible]

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3. In the [illegible] oted, which is partly [illegible] nt decrease in the m [illegible] l or offer by

improving it by one cent) more attractive. This, in turn, might deter liquidity providers from exposing their trading interest in an open order book (SEC 2004: 11166).

4. An iceberg order peculiarity regards to time priority, which is lost whenever the visible part is fully executed. Then, the visible part is 'refilled' from the remaining volume, and the new peak receives a new timestamp which eventually leads to a loss of time priority.

5. See D'Hondt et al. (2003: table 4).

6. It must be noted that the data set used by Pardo and Pascual (2003) does not include hidden orders flagged as such. Instead, the authors operate with publicly available order book information, whereas they compare reported executions with the order book information available for the respective execution time. On this basis, the existence of hidden orders is reconstructed. One assumption underlying this methodology is that the findings 'are conditional on the implicit assumption that the sub sample of executed iceberg orders is representative of the whole sample of iceberg orders submitted' (Pardo and Pascual 2003: 14).

7. figure 5 in Nasdaq Economic Research (2003) indicates that about 40 per cent of total liquidity is hidden.

8. The trivial approach compares total iceberg order volume to total submitted volume. In terms of nominal (i.e., Euro) volume, the overall share of iceberg orders on Xetra is about 10 per cent.

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12. Harris (2003: 323–7) discusses four problems of block initiators in executing large order sizes: Latent demand, order exposure, price discrimination and asymmetric information. Addressing these problems reflect block initiators key requirements in trading. Whereas the problems of price discrimination and asymmetric information are often in the nature of large order sizes and hardly solvable at all, Volume Discovery addresses the problems of latent demand and order exposure. The latent demand problem refers to high search costs for block initiators to find a matching counterparty. Volume Discovery addresses this problem with the simultaneous double exposure of volume orders within a single liquidity pool. The order exposure problem refers to the increased market impact costs that block initiators can expect by unintended information spill over if they expose their large trading interest to other market participants. Volume discovery addresses this problem as volume orders are not disclosed to the market with their full size in the order book.

13. NYSE Rule 127 (Block Positioning) facilitates public limit orders on the Floor to participate in block crossing transactions at the clean-up price if the crossing shall take place outside the prevailing quote (NYSE 2005).

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