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DRILLING THROUGH THE ALLEGHENY MOUNTAINS

Liquidity, materiality and high-frequency trading

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Abstract

In 1999, Carruthers and Stinchcombe provided the classic discussion of ‘the social structure of liquidity’: the institutional arrangements that support markets in which ‘exchange occurs easily and frequently’. Our argument in this paper is that the material aspects of these arrangements – and particularly the materiality of prices – need far closer attention than they normally receive. We develop this argument by highlighting two features of new assemblages that have been created in financial markets since 1999. First, these assemblages give sharp economic significance to spatial location and to physical phenomena such as the speed of light (the physics of these assemblages is Einsteinian, not Newtonian, so to speak). Second, they have provoked fierce controversy focusing on ultra-fast ‘high-frequency trading’, controversy in which issues

of materiality are interwoven intimately with questions of legitimacy, particularly of fairness.

Keywords:

social studies of finance | high-frequency trading | electronic market-making | liquidity | materiality | actor network theory | finance | technology | markets

Notes

1. For the metaphor, see the August 2011 issue of this journal; for the argument that even stock markets 'are normally illiquid with temporal spikes of liquidity', see Pitluck (2011, p. 26).

2. Such venues include ECNs (electronic communication networks), such as Island, which are officially recognised but are not stock exchanges (i.e. do not have the power themselves to 'list' companies).

3. Securities Exchange Act of 1934, section 15A, paragraph b6 (http://taft.law.uc.edu/CCL/34ACT, accessed 26 August 2011).

4. As the effects of the 2008 banking crisis began to wane in the latter half of 2009, trading volumes and volatility – factors that typically boost HFT profits – went down. Some HFT firms withdrew from the market, an interviewee told us, while others seem to have adjusted their systems to reduce risk, which involves trading less frequently.

5. Such interconnections have been present for three decades, and were made vividly manifest by the 1987 crash. Until the last decade, however, the interconnections typically 'passed through' human beings, such as Chicago pit traders, at some point.

6. 'Raw' data feeds come directly from (and are sold by) a single exchange and do not involve the aggregation and processing needed to produce the more commonly used, SEC-mandated, multi-exchange 'consolidated tape'. They therefore reveal order-book changes more quickly.

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