Reputation and interdealer trading: a microstructure analysis of the Treasury Bond market [☆]

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Abstract

Trading generates not only information about the payoff of the assets traded, but also information about the traders themselves. Over time this information creates reputation. By using a unique dataset on the Treasury bond market, we derive a measure of reputation. This is then used to group dealers on the basis of their reputation and to analyze how they react to the reputation of other dealers. We show that the same type of trade, on the same asset, in the same market can generate different volume and volatility patterns depending on the type of dealers originating it. We also identify the ''salient traders''. These traders, even if they do not originate the biggest volume of trade, have the highest impact on the market. These results have strong implications in terms of forecastability of future returns, volatility and overall trading volume because they show that most of the explanatory power of trades is due to salient traders.
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1. Introduction

Trading generates information. Traders learn about future asset payoffs and demand shocks, but also about each other. A dealer receiving an order not only

acquires information about the traded asset, but also updates his beliefs about his counterpart. Over time this process generates reputation and reputation affects trading behavior. Therefore, traders' reputation may help to explain volume and volatility in terms of market impact of trades originated by otherwise identical traders. In the present paper we empirically address this issue by directly inspecting the role played by dealers' reputation on the mechanism of price formation in a dealership market.

French and Roll (1986) argue that "the process of trading may induce volatility". Since that paper dealers' behavior and the interaction with market trading rules have been widely analyzed. However, the lack of data at a disaggregated level has made it difficult to properly test the role played by the existence of different types of dealers. For example, it is well known that large price movements in the Treasury Bond and FX markets are strongly affected by a release of public information (Andersen and Bollerslev, 1998; Fleming and Remolona, 1999), however it remains unclear how dealers' interaction affects the dynamics of these adjustments. Madhavan et al. (1997) recognize that the pricing specification, and therefore volatility and volume, should contain a component that accounts for the way the trade has been intermediated. But they then generically attribute it to imperfections and market frictions without investigating it further.[1]

Bessembinder and Seguin (1993) suggested for the first time a connection between the volatility–volume relationship and the type of trader. More recently, Daigler and Wiley (1999), by observing the futures markets, identify two types of traders: the "in-pit" and "out-of-pit" traders. The former are the floor traders and clearing members who have an informational advantage due to the observation of the order flow. The latter are generically defined as "general public". Trading by the informed dealers results in lower volatility, whereas trading by the general public results in increased volatility. In the FX market, Evans and Lyons (1999) and Lyons (1995, 1997) identify a set of "microstructure-based" variables that help explain the exchange rate dynamics much better than the standard macroeconomic ones.

In all these cases the classification of dealers is based on institutional characteristics (floor traders, clearing members and so on). The goal is limited to incorporating the *institutional* details of the market microstructure into the asset pricing literature, as opposed to directly classifying dealers in terms of their reputation or reaction to other dealers' reputation. Indeed, while reputation has been studied from a theoretical perspective by Sobel (1985) and Benabou and Laroque (1992), no direct empirical investigation of it or estimation of its impact on the market has been carried out. Benveniste et al. (1992) argue that the information generated by the process of trading, by endowing dealers with private information about the other market participants, implicitly establishes reputation for the dealers. Madhavan and Cheng (1997), analyzing reputation in block trading, show how reputation affects the process of price formation. More recently, Battalio et al. (2001)

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[1] "The process of trading itself may generate price movements because of various market imperfections and frictions" (Madhavan et al., 1997).