Time Series Market Microstructure Models of Bid-Ask Spreads

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Abstract

Time series market microstructure models are constructed for the bid-ask spreads of trade by trade data from the Trades and Quotes (TAQ) database of the New York Stock Exchange (NYSE). The bid-ask spreads are decomposed into three components, namely the order processing, adverse selection and inventory components. Assuming the private information is in the form of adverse selection cost component and information is incorporated into security price through trading, we study an information updating process to bring the intrinsic value of the security up to the current speed.