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Abstract

This paper proposes a method to compute ex-ante trading costs at the intraday level from limit order books. Using nearly 500 of the largest traded companies in the NYSE ArcaBook, we show that these costs have nontrivial intraday dynamics, are negatively related to volume and positively related to volatility. When ex-ante trading costs are incorporated into price impact specifications, the results show that this measure provides relevant information about price changes of the market at a high frequency level. Our evidence suggest that ex-ante trading costs constitute a new source of information for the study of intraday liquidity.

Keywords: Intraday liquidity, limit order books, price impact, price formation
JEL Classification: G12; G14

1. Introduction

Electronic limit order markets have emerged as important venues for trading, offering a real-time glimpse of existing supply and demand in the equity market. During the period of 2010 to 2014, the volume traded in NYSE ArcaBook and BATS accounted for 12% and 8% of the total U.S. equity market, respectively.[1] Electronic limit order books contain very rich and complex sources of information about liquidity provision and price formation at the high frequency level. In these markets, ex-ante commitments to offer liquidity are made by investors who submit limit orders, specifying both the price and the quantity to buy or sell. On the other hand, liquidity is demanded by investors who place market orders.

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[1] Data from http://www.batstrading.com/market_data/venue/market/tapea/