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A closing call's impact on market quality at Euronext Paris☆

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Abstract

The Paris Bourse (currently Euronext Paris) refined its trading system to include electronic call auctions at market closings in 1996 for its less-liquid Continuous B stocks and in 1998 for its more actively traded Continuous A stocks. This paper analyzes the effects of the innovation on market quality. Our empirical analysis of price behavior for two samples of firms (50 B stocks and 50 A stocks) for two different calendar dates (1996 and 1998) indicates that introduction of the closing calls has lowered execution costs for individual participants and sharpened price discovery for the broad market. We further observe that market quality is improved at market openings, albeit to a lesser extent. We suggest that a positive spillover effect explains the closing call's more pervasive impact.

JEL classification: G14; G15

Keywords: Market microstructure; Financial markets; Market efficiency; Empirical analysis, International

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1. Introduction

On May 13, 1996 the Paris Bourse (currently Euronext Paris) changed its market structure by introducing a closing call auction for the less-liquid stocks (the continuous B stocks) in its continuous, electronic Cotation Assisteé en Continu (CAC) market. Two years later, on June 2, 1998 the exchange introduced the closing call auction for its more actively traded Continuous A stocks. This paper seeks to assess the impact that the call auction has had on price determination at the close of trading on the Paris Bourse.

A call auction differs from continuous trading in the following way. In a continuous market, a trade is made whenever a bid and offer match or cross each other.[1] In a call auction, the buy and sell orders are cumulated for each stock for simultaneous execution in a multilateral, batched trade, at a single price, at a predetermined time. By consolidating liquidity at specific times, a call auction is intended to reduce execution costs for individual participants and to sharpen the accuracy of price discovery for the broad market.

Closing call auctions were introduced at the Paris Bourse specifically because of customers' demands for improved price discovery at market closings. Most important, derivatives trading was being adversely affected by the ease with which only a few, relatively small orders could change closing prices in the equity market.[2] The situation was making it difficult for traders to unwind their positions at appropriate prices and for positions to be marked-to-market at appropriate prices. Other European bourses have also taken steps to improve the quality of closing prices. Closing as well as opening calls are now incorporated into the market models of, among other European exchanges, Deutsche Börse, the London Stock Exchange, and the Swiss Exchange.[3]

The paper's significance is threefold. First, evaluating the efficiency of the electronic call auction is important in its own right, as the call auction is the least understood of the three major trading regimes (the other two generic market structures are the continuous order book market and the quote driven, dealer market). Second, a crisp, ceteris paribus assessment of any market structure feature is extremely difficult to obtain. Fortunately, the specific way in which the closing auction was introduced in Paris provides an especially clear test of the power of a call market. Third, the paper develops a new and different methodology for assessing market quality. Specifically, we use the well-known market model in an event study context to infer the quality of price discovery at market closings and openings.

[1] In a continuous, order driven market, public limit orders set the quotes and a trade is made whenever a public market order arrives. The market order executes at the best price set by a previously placed limit order.

[2] According to senior officials at the Paris Bourse, this was the motivation for introducing the closing calls.

[3] Call auctions have historically been a standard part of the German exchanges' market model; currently, Deutsche Börse holds four calls a day for its large cap stocks.