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Economic Modelling

journal homepage: www.elsevier.com/locate/econmod

Bank ownership of multilateral trading facilities and implications for historical exchanges: An industrial economics approach

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ARTICLE INFO

JEL:

G10
G23
G24
L10
L11
L22

Keywords:

Banks
Shareholding
Historical exchanges
Multilateral trading facilities
Competition

ABSTRACT

The aim of this paper is to address bank ownership in Multilateral Trading Facilities (MTFs) and its implications for historical exchanges. We propose an oligopoly model with network effects to account for an exchange industry that consists of two MTFs and an historical exchange. Based on the observation that banks are both owners and clients of MTFs, we examine banks' incentive to influence the pricing policy of MTFs. We show that when brokerage and trading activities are particularly important for banks' revenue relative to their profit as MTF operators, certain market outcomes may emerge whereby both MTFs include banks' interest as clients in their objective function. We also demonstrate that accounting for banks' interest in MTFs' objective function acts as a competitive device that reduces the price and the profitability of the historical exchange.

1. Introduction

The European financial landscape has undergone major mutations in recent years. A crucial regulatory change for financial markets in Europe has been the Markets in Financial Instruments Directive (MiFID), enacted in November 2007. The goal of this regulation was to reduce transaction costs and improve market efficiency through strengthened competition among trading venues and the creation of a single securities market.¹ One of the most striking implications of the MiFID is the creation of multilateral trading facilities (MTFs) like BATS Chi-X Europe and Turquoise.² These new electronic trading platforms, which are subject to different regulations from that applying to historical platforms, can be operated by investment firms or market operators. They have no listing process but they allow the trading of securities that are admitted on regulated markets, thus abolishing the previously prevailing concentration rule. Hence, they now compete directly with historical exchanges.

The aim of this article is to analyze how the emergence of MTFs

have affected competition within the exchange industry and, in turn, the pricing policy and the profitability of historical exchanges. Observers and practitioners usually explain the success of MTFs and their adverse effects on historical exchanges by cost, technological or regulatory advantages (Gomber et al., 2017). Several other papers examine competition between a traditional market and another platform like a crossing network or an alternative trading facility. They consider traders with heterogeneous preferences that select platforms according to their investment horizon (Daniels et al., 2013), the quality of their information (Hsu, 2016), their size (Viswanathan and Wang, 2002) or their risk aversion (Viswanathan and Wang, 2002). In this literature, the choice of traders also depends on platforms' transparency (Degryse et al., 2009), the intensity of network externalities (Ellison and Fundenberg, 2003; Daniels et al., 2013) and assets' characteristics such as liquidity (Hendershott and Mendelson, 2000; Daniels et al., 2013) or volatility (Theissen, 2002; Gresse, 2006).

The main contribution of this paper is to consider that the specificity of MTFs and their impact on the exchange industry is also

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¹ For a review of the literature examining market fragmentation's motivations and implications, one can refer to Gomber et al. (2017).

² BATS Chi-X Europe represents the 2011 merger of the two leading pan-European MTFs: BATS Europe (established in 2008 by BATS Global Market, a leading US operator of stock and options markets) and Chi-X Europe (created in 2007 by Instinet and a consortium of twelve financial institutions). Turquoise was initially funded by nine investment banks. Since December 2009, it has been owned mainly by LSE (51% since March 2010). Several other MTFs, such as Equiduct (created by Börse Berlin), TOM (created by AbnAmro, BinckBank and Optiver) and Aquis (created by the former CEO of Chi-X), still operate in Europe, but BATS Chi-X Europe and Turquoise are the most important on European indices. NYSE Arca Europe, created by NYSE Euronext, operated for five years, from April 2009 to 2014. It was closed down in May 2014 in connection with the sale of Euronext by ICE.

<http://dx.doi.org/10.1016/j.econmod.2017.04.014>

Received 7 July 2016; Received in revised form 8 February 2017; Accepted 20 April 2017
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narrowly linked to an ownership issue.³

The rationale for ownership structure has a two-fold aspect. First, one can observe that some MTFs are owned primarily by banks, which were also involved in their creation. MTFs were created by commercial or investment banks following the MiFID to benefit from lower trading costs than those on historical venues and to ultimately respect the best execution principal for third parties.⁴ Because MTFs in Europe charge lower prices than regulated markets (Fioravanti and Gentile, 2011), they operate at a loss and are subsidized by financial institutions or banks that route orders to the MTFs of which they are the main shareholders. Second, the way in which historical venues reacted to this new financial context also relate to ownership issues. Creating or purchasing MTFs has allowed historical regulated markets to diversify their revenues' sources, activities and services at lower cost (Cantillon and Yin, 2011). It also prevented them from losing customers to other low-cost trading MTFs, thus avoiding an additional fee decline following the fee reductions implemented by some of them (Euronext: -30% in 2008 (Fleuriot, 2010)) in conjunction with the MiFID.⁵ Taken together, these observations suggest that ownership structures are not neutral with respect to the emergence of MTFs. They may also affect the competitive structure of the exchange industry and the profitability of historical exchanges.

The goal of this paper is precisely to address the impact of bank ownership of MTFs on the pricing policy and the profitability of historical platforms. Because it is composed of an historical platform and a few number of MTFs, the exchange industry exhibits an oligopolistic structure. For this reason, it is characterized by the existence of strategic interactions that crucially affects platforms' behavior. Hence, the effect of banks' ownership in MTFs on the competitive conditions within the exchange industry and the profitability of the historical platform cannot be addressed without accounting for such strategic interactions. For this reason, as suggested by the research agenda of Cantillon and Yin (2011), we adopt an industrial economics approach.

We thus propose a stylized model, in which we consider competition between two MTFs and an historical exchange (for example, Euronext or LSE). The contribution of our model is based on the idea that a client of a MTF can also be its shareholder. As a consequence, the objective function of MTFs' shareholders crucially differs from that of the historical exchange.

The behavior of MTFs' shareholders is considered as follows. Because banks are majority shareholders of MTFs, they may be tempted to urge the MTF they own to reduce the level of fees for themselves as clients and to ultimately respect the best execution principal for third parties. Hence, MTFs may include in their objective function not only banks' profit as shareholders but also their utility as clients of their own MTF. Consequently, MTFs' shareholders are more interested by maximizing total revenue (i.e., the sum of their profit as shareholders and their utility as clients) than by the sole profit maximization.

On the contrary, we consider that the objective of the historical platform is only to maximize profit. There exist at least two rationales for this assumption. First, because free floating on historical exchanges may be important, the role of shareholders may be diluted. Second, although some of them are banks, the shareholders of historical

platforms do not particularly seek to reduce fees and do not urge historical exchanges to propose even more significant fee reductions (beyond that observed on regulated markets in the wake of the MiFID). Indeed, on the one hand, some of the shareholders may already enjoy preferential fees due to their volume of trading or their membership conditions as clients and their historical relationships with the operator. On the other hand, they may also belong to a group of reference shareholders, without any intention to benefit from lower fees when they participate in the venue; rather, they seek to benefit from the political aspect of their investment. Let us consider Euronext, for example. Since the initial public offering in 2001 (and until 2007), approximately 70% of the group's capital has been held in floating shares. At the time of the public offering in 2014, the free float for Euronext was approximately 66%. Consequently, core or reference shareholders (BNP Paribas, Caisse des dépôts et consignations, BPI France, Société Générale, Euroclear, ABN Amro, ASR Nederland, the public Belgium holding Société fédérale de participations et d'investissement, Banco BPI Pension Fund and Banco Espirito Santo) hold 33.36% of Euronext's capital. They made a covenant, ensuring that they would maintain their stake in Euronext for three years to improve the independence of Euronext and build the future of European exchanges. After this period of non-transferability of capital, the governments of the countries in which Euronext operates must maintain these shareholders' capital. This should be not very difficult because these shareholders are major financial institutions in their country, some of which are public. Moreover, "it is clear that, for the reference shareholders, investing in Euronext is a political act and not an action of good management. But, for those who had the courage to invest, it is worthwhile in terms of image and reputation. It is a manner of saying: "I support the Economy and I am a key actor in the financial market place and the State policy." (Declaye, 2014). Hence, in this context of free floating and political covenants, it seems reasonable to assume that historical exchange's shareholders did not seek to urge the platform to lower prices and to include their utility as clients of the platform in its objective function. For this reason, we consider that the historical platform only maximizes profit.

In a previous paper, we transpose the two-sided market model of Armstrong (2006) to the MTF industry (Lahet and Vaubourg, 2015). We consider two MTFs in a duopoly and demonstrate that when brokerage and trading activities are particularly important for banks' revenue relative to their profit as MTF operators, certain market outcomes may emerge, whereby both MTFs include banks' interest as clients in their objective function. Both MTFs generate negative profit. However, because banks benefit from lower fees as MTF clients, they eventually earn substantial global revenue.

The present paper extends this analysis by focusing on the implication of banks' ownership in MTFs on the pricing policy and the profitability of the historical platform. Following Salop (1979), we consider an exchange industry composed not only of two MTFs but also of an historical platform. As mentioned above, in opposition to MTFs, the historical platform is assumed to only maximize profit. Using this oligopoly model, in which we introduce network effects, we show that the importance of brokerage and trading activities for banks determines the strength of competition in the exchange market, which in turn affects the profitability of the historical exchange. The main contribution of this article is to show that the intensity of competition faced by the historical exchange crucially depends on the ownership structure of MTFs and the importance of profits relative to trading and brokerage activities in their shareholders' revenue.

The remainder of the paper is organized as follows. In Section 2, we present the assumptions. The model is solved in Section 3. In Section 4, we consider some extensions to our work. Section 5 offers a discussion and concludes.

³ Note that, in the conclusion of his paper on stock exchanges' performance, Lo (2013) considers the ownership issue as an interesting extension of his work ("Whereas the main purpose of this article is to integrate listing and trading decisions, in order to construct a fully comprehensive model of a stock exchange's performance and its relative position in the world capital market, one might extend this topic by incorporating other explanatory variables (e.g., ownership structure, governance, bureaucracy, etc.) into the model.", p. 509).

⁴ The best execution principle requires choosing the best venue for clients in terms of factors such as transaction costs, quality and speed of execution.

⁵ The infrastructure on historical exchanges remains more cumbersome than on MTFs and do not allow substantial fee reductions.

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