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# The determinants of alternative trading venue market share: Global evidence from the introduction of Chi-X<sup>☆</sup>



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### ABSTRACT

In this paper, we examine market share drivers of a prominent alternative trading venue (Chi-X) in an international context. We find that Chi-X's market share is negatively related to trading fees and latency, while positively related to liquidity relative to primary exchanges. Venue market share is negatively related to order-to-trade ratio and positively related to average trade size, suggesting traders' preference to interact with natural and accessible liquidity. Furthermore, trading tends to concentrate on the primary exchange during market stress, while tick constraint stocks tend to trade more on Chi-X to avoid queuing at the touch on the primary exchange.

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## 1. Introduction

The introduction of competition in the exchange markets domain has been made possible by a combination of regulatory reform and technological advancement. Alternative trading platforms have succeeded in capturing trading volumes and market share from traditional exchanges. Since the advent of electronic communications networks (ECNs) in the late 1990s, the emergence of alternative trading venues that are more “exchange-like” (e.g., Turquoise, NASDAQ OMX, and BATS) has increased the intensity of competition for order flow in financial markets.

In this paper, we examine the performance drivers of a prominent alternative trading venue (Chi-X) as it competes with incumbent exchange markets in Australia, Continental Europe, Japan, and the United Kingdom.<sup>1</sup> Chi-X is an operator of alternative trading venues that has successfully competed with incumbent exchanges for order flow in recent years. Since its introduction across multiple established financial markets across the world, it has managed to gain significant trading volume by eroding that of the incumbent exchanges.

This paper makes a number of notable contributions to the current literature. It is the first study into the determinants of alternative trading venue market share in an international context. It provides insights into the competitive dynamics in the exchange market operators' domain, by examining the performance of Chi-X vis-à-vis incumbent exchanges following the advent of competition. We investigate how trading fees, technology, market structure, liquidity, stock, and venue characteristics can play different roles in the market share that a trading venue achieves. The results are informative for the understanding of the main factors that traders consider in making their venue selection decisions, which ultimately determine a venue's competitiveness and market share.

In addition, we examine the drivers and paths of trader adoption of Chi-X as an alternative venue for order execution. The adoption rate for a new entrant into a market starts at zero and tends to increase over time. A new entrant generally attracts certain segments of the market faster than others. We follow the methodology in [Boehmer, Jennings, and Wei \(2007\)](#) to examine how the choice of an execution venue relates to observable characteristics of the different trading venues on regression analysis with lagged explanatory variables.

Finally, we conduct multiple market event studies on the market quality impact of Chi-X's introduction after controlling for changes in the determinants of spreads and depth. Our analysis provide further global evidence on the economic impact of competition between exchange markets by examining market quality and transaction costs.

The results indicate that Chi-X market share is negatively related to trading fees and latency relative to the primary exchange. We find that Chi-X market share is positively related to liquidity relative to the primary exchange, measured by bid-ask spread, depth, and percentage of time it displays best bid and offer. Venue market share is negatively related to order-to-trade ratio and positively related to average trade size, which suggests trader preference to interact with natural and accessible liquidity. Furthermore, trading tends to concentrate on the primary exchange during market downturns and when volatility is high, while tick constraint stocks tend to trade more on Chi-X to avoid queuing at the touch on the primary exchange. An improvement in market liquidity in regions where Chi-X was introduced during relatively normal market conditions is also documented.

The findings in this paper should be of interest and relevance to market operators, participants, and regulators alike. Management of stock exchanges as well as alternative trading venues may gain insights on their performance drivers based on various venue and stock characteristics, in evaluating their competitive strengths and weaknesses against rival trading venues. This paper may assist alternative trading venues in the specification of their market structure and selection of securities to trade. The findings should also be informative to brokers and professional traders in providing insights into factors influencing order routing and venue selection decisions. Further this paper may aid financial market regulators in making policy decisions that may affect the wider market structure and the competitive dynamics of rival exchange venues.

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<sup>1</sup> Chi-X does not operate in the United States, while data constraints prevent us from examining Chi-X's operations in Canada.

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