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Locals, foreigners, and multi-market trading of equities: Intraday evidence from Thailand☆

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ABSTRACT

We study stock market orders and trades in a developing country, Thailand, where foreign ownership limits partially segment local and foreign investors into two distinct markets. Some foreigners forgo voting rights and distributions to trade on the “local board”, while some locals forgo such benefits and pay a price premium to trade on the “foreign board”. Regardless of nationality, these cross-market traders typically submit orders when liquidity is high, fill orders at relatively beneficial prices, exploit patterns in stock prices across markets, display profitable holding-period returns, and enhance price discovery. This suggests that skilled, informed trading that affects market quality does not depend on trader nationality.

1. Introduction

This paper examines a unique equity market structure. In Thailand, regulators and individual companies impose limits on the fraction of a company's equity that can be held by foreigners.[1] When

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[1] Prior to the 1997 Asian Crisis, all companies listed on the Thai exchange had to be legally “Thai”, implying a maximum foreign ownership of 49%. The government imposed a tighter limit, 25%, in certain industries, such as banking. The heavily-traded companies in our sample were all listed prior to 1997.

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interest in Thailand's stock market and in emerging markets generally began to pick up in the middle 1980s, the fraction of shares owned by foreigners began to hit these limits for many listed companies. In September 1987, the stock exchange organized a formal market, the Alien Board, where foreigners could trade shares of companies that had reached their foreign ownership limit.

Prices on the Alien Board typically exceed prices for otherwise identical shares restricted to local investors by a substantial premium, which cannot be arbitraged away.[2] Although trading is formally segmented into distinct boards for local investors and foreign investors, investors can cross to the "other" board, but at a cost. Thai investors can freely buy Alien Board shares, but must pay a price premium and may only register them as Main Board shares. Since registration on the Main Board would forfeit the value of the Alien Board premium, locals hold Alien Board shares unregistered and lose cash and stock dividends, warrants, other distributions, and voting rights. Furthermore, to avoid losing the premium, a local will only sell an Alien Board share back into the Alien Board market. Foreign investors can buy Main Board shares, but cannot register them once the foreign ownership limit is hit and, therefore, forgo all distributions on any Main Board holdings.[3] Furthermore, a foreigner can only sell Main Board holdings back into the Main Board market. The trading system on both boards is electronic and order-driven. Broker screens display depth at the three best bid and ask prices, but do not reveal trader identity.

This unusual institutional setting helps us study some interesting questions. What market and investor behaviors occur in a multiple-market setting where different types of investors interact and where some investors choose to cross between markets? Are foreign investors a disruptive, speculative force in emerging capital markets, or do they enhance the quality of such markets? Do foreign investors differ from local investors in substantial ways? Our dataset includes some information about the identity of the trader standing behind each order. Specifically, we know whether each order is associated with a foreigner (almost certainly an institution), a Thai institution, a member of the stock exchange, or a Thai individual. Locals may benefit from better access to information about local companies, while foreign institutional investors may benefit from more resources and experience. Such issues have been studied by several authors recently, and are important to understanding the effect of foreign portfolio investment in the wake of repeated financial crises in developing economies. The nature of the Thai market and our data allow us to present some interesting new evidence on this subject.

To understand how trading evolves in this interesting setting and whether investor nationality matters, we conduct a series of empirical tests with intraday records of orders and trades from Thailand in 1999. A summary of our findings is as follows. In spite of the costs to switching to the "other" market, foreigners account for 15% of the trading volume on the Main Board, and Thai individuals account for 44% of the trading volume on the Alien Board. There is much evidence that liquidity is a driver of cross-market trading. Cross-market orders tend to be submitted at times of high liquidity (that is, low bid–ask spread and high depth) in the market to which investors cross, and, as a consequence, cross-market orders tend to be filled at relatively better prices.[4] Some evidence also suggests a relationship between information and cross-market trading. Cross-market traders appear to use market information to trade on mean-reversion in price differentials across the two boards and other patterns. Holding period returns based on cross-market trades appear particularly profitable, suggesting that some cross-market activity represents informed trading. Cross-market trading also appears to contribute to price discovery, again suggesting informed trading.[5] Above all, evidence of skilled, informed trading is not confined to either local or foreign investors, but can be observed among both Thai and non-Thai traders during the period we study.

The balance of this paper is organized as follows. Section 2 motivates our tests. Section 3 discusses the data, relevant institutional details of the Stock Exchange of Thailand, and some of the basic calculations and transformations of the data needed for our tests. Section 4 presents results while Section 5 is a summary and conclusion.

[2] Once the books of the company indicate that the registered holdings of foreigners have reached the limit, shares bought on the Main Board cannot be sold on the Alien Board because that would violate the foreign ownership limit. Shares bought on the Alien Board will not be sold on the Main Board because the price premium would be lost. If a particular stock never reaches the foreign ownership limit, or drops below the limit, all trading reverts to the Main Board.

[3] During the period we study, these "lost" dividends went to the custodian bank.

[4] Drudi and Massa (2005) study primary and secondary markets for Italian government bonds, and find that some dealers trade aggressively across markets in a manner that contributes to liquidity.

[5] Related empirical papers include studies of price discovery for stocks listed on more than one U.S. exchange (Hasbrouck, 1995) or across equity and equity derivative markets (Chan et al., 1991; Stephan and Whaley, 1990; Easley et al., 1998; Chan et al., 2002).