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Inter-temporal examination of the trading activities of foreign investors in the Korean stock market

Jaemin Kim [a,*], James Landi [b], Sean Sehyun Yoo [c]

[a] College of Business Administration, San Diego State University, San Diego, CA 92182-8236, USA
[b] ACAP Advisory PCL, Bangkok, 10120, Thailand
[c] College of Business Administration, Belmont University, Nashville, TN 37212-3757, USA

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ABSTRACT

In the full market-opening period of the Korean stock market (1999–2006), when foreign equity ownership reached as high as 40% of the total stock market capitalization, foreign net flows move in the same direction contemporaneously with the domestic market return, while lagged foreign flows are not followed by any significant changes in the domestic market return. On the other hand, an increase (decrease) in foreign net buy is followed by Won appreciation (depreciation) relative to the US dollar; however, the reverse relation does not hold. Throughout the entire sample period (1995–2006), foreign flows are not significantly related to stock market return volatility.

1. Introduction

While various issues are addressed in numerous studies on the roles of foreign investors in emerging equity markets, a key issue involves how foreign investors fare as compared to domestic investors. One of the often asked questions is whether foreign investors trade differently from domestic investors. Closely related to this, the question of whether or not information asymmetry exists between foreign investors and local investors has received much attention in the literature.[1] It is well documented that the onset of the Asian financial crisis in the late 1990s triggered a heated debate on the conjecture that foreign traders armed with superior information exacerbated or even instigated the crisis in the Asian financial markets including the Korean market.

Ten years have passed by since the crisis hit the Korean financial market, and in 2006, foreign investments accounted for 35% of the total market capitalization after reaching a high of 40% in 2004. Foreign investors, domestic institutional investors, and domestic individual investors are the three largest shareholder groups in

* Corresponding author. Tel.: +1 619 594 2721; fax: +1 619 594 3272.
E-mail address: jkim@mail.sdsu.edu (J. Kim).

[1] For the related literature, see comprehensive reviews by Stulz (1999) and Bekaert and Harvey (2003).

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Korea, comprising more than 95% of total market equity in 2005. In this study, we focus on times series changes of the trading activities of foreign investors, domestic institutions, and domestic individuals from the period when the stock market was partially open to foreign investments (partial-opening period) to the complete market liberalization period free of all investment restrictions (full-opening period). The sample we use spans 12 years from 1995 to 2006, including about 8 years of the post-crisis, full-opening period. As we focus on this inter-temporal issue, we examine specifically, (1) whether foreign investors affect market returns; (2) whether foreign investors affect market return volatility; and (3) whether foreign investors affect foreign exchange rate returns. As far as we are aware, the subject of stock market volatility and foreign exchange rate returns in conjunction with international trading flows has received little attention in the literature. In terms of research methods, we employ VAR models and GARCH-M estimations.

Previous studies on the role of foreign investors in the Korean stock market focus on the earlier period in our sample—the time around the Asian financial crisis. Choe et al., (2005), using an intra-day dataset of the Korean stock market for the period 1996–1998, asserts that foreign investors pay more for the stocks they purchase, and receive less for the stocks they sell for medium and large sized trades, suggesting that domestic investors have an informational edge over foreign investors.[2] A study by Kim and Wei (2002) on the Korean stock market from December 1996 to June 1998 presents evidence of positive feedback trading and herding by foreign investors residing outside of Korea. Richards (2005) examines equity markets in five nations, including Korea from 1999 to 2002, and finds that foreign trading flows show positive feedback characteristics with respect to global returns as well as domestic returns, and that price impacts of these foreign flows on the domestic market returns are larger than expected.[3]

Several papers, such as those by Bekaert and Harvey (1997, 2000) and Kim and Singal (2000), do address the issue of stock market volatility. These studies examine the impact on market volatility of emerging market liberalization, and find that stock market openings have an insignificant effect on market volatility. Their empirical work is largely based on the monthly return index on a representative set of stocks in each emerging market compiled by the International Finance Corporation (IFC).

We complement their research by explicitly examining daily flows of foreign capital and their effect on the volatility of the value-weighted *total* market index for periods far beyond market openings. Moreover, by focusing on the Korean equity market, we intend to capture the country-specific effects which could be buried in a typical multi-country study, as there are significant cross-country variations.[4]

We find no evidence that in the complete market-opening period, net equity purchases by foreign investors (and by domestic investors as well) are followed by a significant change in the domestic stock market index. We do find that contemporaneous (i.e. same day) foreign net flows, an insignificant variable in the partial market-opening sample, turn positive and significant in the domestic market return in the full-market opening period, reflecting the substantial presence of foreign investors in the post-crisis Korean stock market. This result on the contemporaneous term is consistent with the findings of Griffin et al., (2004) and Richards (2005) that such trading behavior is not information-driven.

Similar to the foreign net flows, we find that the contemporaneous net flows of domestic institutions are positively associated with the domestic market return in the full-market opening period. Assuming that most of the foreign investors are institutional investors, the evidence on the contemporaneous flows of foreigners and domestic institutions is consistent with the hypothesis that foreign institutions and domestic institutions tend to herd when they trade contemporaneously with the market movement in a given day in the post-crisis, fully liberalized Korean stock market.

With respect to the market return volatility, GARCH analyses show that in all periods, the trades by foreign investors are not related to any significant change in market volatility. Certainly, foreign investors,

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[2] Previous research addressing the issue of information asymmetry and foreign trading flows includes Grinblatt and Keloharyu (2000) on the Finnish stock market and Seasholes (2004) on the Taiwanese stock market. For brevity, we do not detail their findings.

[3] Other studies that document the positive feed back trading pattern of international traders include Choe et al. (1999), Froot et al. (2001), Karolyi (2002), and Griffin et al. (2004).

[4] For example, IFC 20 nations include Argentina, Brazil, Chile, Colombia, Greece, India, Indonesia, Jordan, Korea, Malaysia, Mexico, Nigeria, Pakistan, Philippines, Portugal, Taiwan, Thailand, Turkey, Venezuela, and Zimbabwe. According to the World Development Indicators (World Bank, July 2006), as for 2005 year-end stock market capitalization, Korea is the highest among these 20 countries at $718 billion, and Zimbabwe the lowest at $2 billion. With respect to GDP in 2005, Brazil is the highest at $794 billion, Korea at $787 billion, and Zimbabwe lags at $3 billion. Overall, the Korean stock market ranked 14th in the world in terms of market capitalization, ahead of Russia, India, and Brazil, and behind the Netherlands, while the Korean GDP was ranked 11th, larger than that of Australia and smaller than that of Canada.