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# How cross-listings from an emerging economy affect the host market?

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ABSTRACT

We study the impact of mainland Chinese listings in Hong Kong on the quality and development of the Hong Kong equity market. At the macro-level, we find that the increasing presence of mainland Chinese stocks in Hong Kong increases the size, trading volume, and its link with the China and world markets but reduces the overall volatility of the Hong Kong stock market. At the firm level, the increase affects the market quality, resulting in lower turnover rate, higher Amihud illiquidity ratio, and higher spread for non-mainland Chinese firms. Furthermore, such an increase in presence causes Hong Kong stocks to move in a more synchronized way and reduces these firms investment sensitivity to stock price movement, implying deterioration in the information environment. As a whole, the increasing presence of Chinese companies in Hong Kong brings benefits to the Hong Kong market, yet not without cost.


## 1. Introduction

Cross-listing studies typically examine how cross-listings affect these cross-listing firms and their own home markets, but few of them study how they affect the *host market* (i.e., the market that hosts the cross-listed stocks). This unexplored area is important because in today's globalized economy, international capital flows have become increasingly frequent and important. Many stock exchanges, large and small, are competing with each other to attract foreign listings (see Pagano et al., 2002). When the number of international stocks cross-listed in a country's market becomes large relative to the number of the country's own stocks, how such cross-listing activities affect the host stock market will become a significant issue.

In recent years, especially in the past decade, there is a growing number and concentration of mainland Chinese stocks listed on The Stock Exchange of Hong Kong (SEHK) in the form of H-share and "Red Chips" (refer as "China listing" hereafter). In view of the fact that Hong Kong is a relatively small economy with a quite advanced stock market while China is the largest developing economy with a fast growing but less sophisticated equity market, such a setting is most suitable for a systematic investigation on both the potential positive and negative impacts of cross listings on the host market.[3] Our approach is to use a similar set of measuring variables to look at both the macro- and micro-impacts of mainland Chinese stocks cross listings on the Hong Kong stock market. At the macro-level, we examine how the presence or the increasing presence of mainland Chinese stocks affects the overall scale and trading activities of the Hong Kong equity market. Specifically, we look at the aggregate level how more and more listings from Mainland China (i.e. the China H-shares and red chips) affect Hong Kong's market capitalization relative to GDP, the turnover, the liquidity and the volatility of the Hong Kong market. The main incentive to attract foreign listings is to increase the size and trading of the domestic market. However, it is not clear if the cross-listing increases the overall market size at the expense of local stocks. Findings of this study will shed light on this issue.

At the micro-level, we study how China listings affect the market quality of the host market in terms of the turnover, liquidity and transaction cost for individual stocks, and the informativeness of share prices. There is a "bonding theory" in the cross-listing literature, suggesting that firms from a market of poor governance

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[3] As of 2011, there were around 350 Chinese companies listed in Hong Kong (including SEHK and GEM), accounting for about 60% of the bourse's total capitalization.

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quality can leverage on the high governance quality of a foreign market through cross-listing their stocks to that foreign market.[4] We argue for another possibility that even though the host market has relatively high listing, disclosure, and governance standards, these high governance standards cannot be fully enforced onto cross-listed firms and/or the host market may compromise standards for cross-listing business. In fact, there is always a concern that competition among exchanges may lead to a "race to the bottom" (Santos and Scheinkman, 2001). The issue will be particularly acute when a large number of stocks from "low-quality" markets list in the host market to "contaminate" the quality of the host market through increasing the information asymmetry, the volatility and trading spread of the host market so that market prices become less informative.

Arguably, the China market is of lower quality than the Hong Kong market and hence this could be a real concern. There are two possible channels for China listings to affect the Hong Kong market. One is simply through the lower quality of the cross-listed stocks per se. If companies of these cross-listed stocks practice lower governance standards and the host market cannot enforce and uphold its high standards onto these companies, the host market quality will be contaminated. Indeed, Martin Wheatley, the previous CEO of the Hong Kong Securities and Futures Commission (SFC), once mentioned certain misconduct of Mainland issuers in Hong Kong: "they falsified financial information in their prospectuses, channeled the funds raised from the public market to purposes other than for the benefit of the company, or provided substantial amounts of financial assistance to related parties on unfair terms ... where it is outside your own jurisdiction, you have to rely on the powers of the 'home' regulator".

Another example is that Chinese authorities denied SFC requests on several suspects in high-profile corporate scandals involving possible fraud and/or corruption-related criminal elements like Liu Jinbao (former deputy Chairman and CEO of the BOC (HK)), Zhou Zhengyi (Chairman of the Shanghai Land Holdings), and Yang Bin (Chairman of Euro-Asia Agricultural Co.). Hong Kong investigators were denied access to the relevant information of these people. These two examples suggest that the deterioration of market quality could be in the form of lower quality of listed firms, less information transparency, less ability on legal enforcement and hence less protection of investors in the host market. As such, the quality of the Hong Kong market is driven down by the quality of the cross-listing stocks.

However, when the number of low-quality cross-listed stocks increases, a more serious situation of a general "quality transmission" may arise. There is a line of literature on stock market contagion and volatility spillover. Explanations such as information correlated across markets (King and Wadhwani, 1990), cross-market traders liquidating their positions across markets due to liquidity shocks (Yuan, 2005), due to wealth effect (Kyle and Xiong, 2001), or due to traders doing cross-market portfolio rebalancing (Kodres and Pritsker, 2002) are suggested as why such contagion effect is possible across markets not fundamentally connected. Since cross listing is effectively bridging geographically segmented markets, these suggested contagion channels would conceivably be more viable and direct so that the contagion effect between the cross-listed stocks and the domestic stocks would be considerably larger and quicker as the trading friction for supposedly segmented markets will then be greatly reduced.

A vivid example is the so-called "through-train program" suggested by the State Administration of Foreign Exchange (SAFE) in August 2007 under which individuals of mainland China are allowed to buy Hong Kong stocks directly. The announcement brought the Hang Seng China Enterprises Index, which represented the H-shares, up by 68.8% and the Hang Seng Index (HSI) up by 60% in 3 months even the subprime mortgage crisis began to surface. Yet, when Chinese Premier Wen Jiabao expressed his worries on the program during his visit in Hong Kong in November 2007 and the program was hence suspended (though the program has never been officially announced), HSI plummeted 10,000 points from its record high of 32,000 in October 2007 to 22,000 in January 2008 accordingly. If there were no Chinese firms cross-listed in Hong Kong, mainland individual investors would then have no familiar, mainland Chinese stocks in Hong Kong to invest (given the general findings of "home bias" inclination of investors). As such, such program would have much less impact to the Hong Kong market.

We hence argue for the existence of the spillover impact from the cross-listed Chinese stocks onto the domestic Hong Kong stocks, especially when the size of the Hong Kong market hosting the cross-listing Chinese firms is relatively small. We test such conjecture by examining if the increase in cross listings of Chinese stocks will lead to higher volatility of the Hong Kong stock market and widen the bid-ask spreads for individual stocks in Hong Kong. Yet, the possible diversification benefits of more Chinese stocks listed in Hong Kong should not be overlooked. This is especially the case in our setting here given the fact that the companies of these stocks are very different from other Hong Kong listed companies in terms of the business nature. For instance, Chinese companies listed in Hong Kong like PetroChina, First Tractor and China Railway are in industries not existed in Hong Kong. Furthermore, these Chinese companies are typically of much bigger size than local Hong Kong companies. As such, the volatility of the Hong Kong market may actually be reduced due to these factors. On the other hand, if there are "too many" cross-listed firms for the host market to absorb in the sense that a relatively fixed amount of capital has to spread among increasing number of stocks, individual domestic stocks may lose trading volume and order flows. All these will affect the information discovering process of domestic stocks.

The synchronicity literature argues that stocks in markets with little firm-specific information tend to move in tandem while stocks in markets with more firm-specific information tend to move in different directions. The classic study by Morck et al. (2000) actually uses China market as an example of high synchronous price movements. We hence investigate if the pervasive "penetration" of Chinese stocks would deteriorate Hong Kong market's information environment by looking at $R^2$ and the proportion of stocks moving in the same direction. Along the line, we further examine the investment sensitivity of Hong Kong stocks. The literature on investment sensitivity to share value argues that management's investment decisions will be more sensitive to share value if the company's share price is more informative (Chen et al., 2007). If Hong Kong stock prices become noisy with increasing China listing, we will observe a general decline in investment sensitivity of Hong Kong companies.

Our findings can be summarized as follows. At the macro-level, Mainland China listings bring benefits of increasing both the market capitalization relative to GDP and the turnover for the whole Hong Kong market. Specifically, the positive impact is mainly on the size and turnover of the mainland stocks but not the non-mainland stocks. However, such listings do not have any significant impact on the liquidity at the market level. Further benefit of listings comes from an overall decrease in the market volatility, which is probably due to the diversification benefits of having more diverse types of stocks in the market. On the other hand, it increases the co-movement of the Hong Kong market with the both the China market and the world market.

[4] See Stulz (1999), Coffee (2002), and Doidge et al. (2004), for instance. Some studies like Licht (2003), Gozzi et al. (2010), and Sarkissian and Schill (2009), however, question such view.