行政院國家科學委員會補助專題研究計畫成果報告

上櫃轉上市、流動性、與市場微結構：
台灣股票市場的觀察與實證研究

計畫類別：☑個別型計畫　　□整合型計畫
計畫編號：NSC 89-2416-H-032-031
執行期間：89 **年** 8 **月** 1 **日至** 90 **年** 7 **月** 31 **日**

計畫主持人：陳達新
共同主持人：盧陽正

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一、摘要

Abstract

This paper explores the value of a listing switch, the market reaction, as well as the associated microstructure effects for selected stocks that moved from the OTC markets to the Taiwanese Stock Market (TSE). On average, abnormal stock returns are found in the period before an official exchange listing-transfer announcement, implying a possible information leakage and supporting the listing information-content hypothesis. However, the abnormal returns vanish after the announcement. Moreover, after the announcement, we find significant market reactions on the day before the stocks start trading on the TSE. The positive abnormal returns in the post-listing period are not significant and even display a reversal. The results also indicate that the OTC-to-TSE movement in Taiwan is indeed a liquidity improvement mechanism.

Keywords: OTC Markets, Liquidity, Abnormal Returns, Taiwanese Stock Market, and Listing Transfer.

二、緣由與目的

There are two objectives that motivate this paper. First, we want to examine the value of a listing switch, market reaction, as well as the associated microstructure effects for selected stocks that move their listings from the over-the-counter (OTC) markets to the Taiwan Stock Exchange (TSE). That is, we want to know if there is an exchange listing transfer effect on the Taiwanese equity market. Second, we also want to examine whether corporate insiders systematically act on their private information during the exchange listing process.

The stock listing choice is one of the crucial decisions that corporate decision-makers have to make. Each year many corporate managers have to decide many listing-related issues, which include whether or not to seek a transfer of listing location or to become unlisted. A question of interest for both financial economists and practitioners alike is whether these listing-related decisions have any positive value. Those decisions, some might argue, should not influence stockholders wealth, except for their microstructure effects since company's risk, cost of capital, earnings, cash flows as well as other financial variables should not be significantly affected by the listing-related decisions.[1]

However, the link between a transfer in market listing and changes in stock price return performance, liquidity and shareholder wealth has not yet been totally explained. Nor is there a thorough explanation of the relation between the listing switch decision and managerial preferences. Furthermore, it is not clear that analyses of the cost/benefit tradeoffs of making such a switch have been rigorously done.

Past studies, some dating back more than 50 years, tried to examine whether listing decisions influence shareholders wealth.[2] In general, prior research has found an anomalous increase in the price of a stock is associated with the announcement of a listing switch from the OTC to a major organized exchange such as New York Stock

[1] Baker and Meeks (1991) conduct a comprehensive synthesis of research on exchange listing and conclude exchange listing has no significant effect on a firm's cost of capital and on reducing the perceived riskiness.

[2] See, for example, Ule (1937).

Exchange (NYSE) or American Stock Exchange (AMEX). But such research also found an anomalous decrease in the price of a stock, immediately after the listing change is effective (see, for instance, Baker and Edelman (1992) and Kadlec and McConell (1994)).

These results are not specific to the U.S. market, since Hwang and Jayaraman (1993) and Dubois and Ertur (1997) report similar figures when firms switch listings to the Tokyo Stock Exchange 1st section and to the Marché à Règlement Mensuel (an organization of the French stock exchange), respectively.

The most widely accepted consensus about listing transfer is that listing on a national exchange has both economic and non-economic benefits. Since exchange listing is generally regarded as a costly certification process, the benefits of a listing transfer must exceed the costs if the listing decision is rational. These benefits can possibly explain why the market responds positively to the value associated with national exchange listing.

Baker and Pettit (1982), Baker and Johnson (1990), Baker and Meeks (1991) survey managers of firms moving their firms' listings from a dealer market (NASDAQ or OTC) to an auction market (AMEX or NYSE) and attribute the motives as being geared to (a) enhance market visibility, (b) improve trading liquidity, (c) provide stable environment for their stocks, (d) signal managerial expectation, and (e) increase prestige after the transfer.

Lamba and Khan (1999) also suggest the abnormal returns, associated with the change in listing, may be due to (i) the information content of the listing operation which induces an upward revision of the future earnings, and (ii) the decrease in the discount rate caused by less risky cash flows, (iii) an increase in trading volume, and (iv) a relative increase in the size of the firm's investor base.

Baker (1993) and Baker, Powell, and Weaver (1999) provide some empirical support for the conventional notion that switching to a national exchange is related to an increase in visibility.[3] There is evidence of increased investor interest, institutional ownership, and research coverage. Moreover, their results are particularly well suited to the theoretical model developed by Merton (1987), who proposes that, all things equal, an increase in the size of a company's investor base will reduce investors' expected return and therefore raise the market price of the firm's stocks. Thus, firms with fewer shareholders would have incentives to take activities with a desire to increase the investor base of the company's stocks. This is the so-called "investor recognition" hypothesis. One of the activities that can help expand the investor base or investor recognition, as Merton suggests, is to change the listing to a national exchange.[4]

Therefore, by listing their shares on a national exchange, managers not only can achieve visibility gains but also expand a company's investor base. Amihud, Mendelson, and Uno (1999) thus suggest that expanding the distribution of share ownership is one of the goals of many corporate managers, stock exchanges, and policymakers. Many researchers such as Barry and Brown (1986) and Arbel and Strebel (1982, 1983) also show that neglected firms, their lower visibility and limited information, constitutes a source of risk and thus investors demand a higher equilibrium expected rate of return.

Furthermore, listing on a national exchange can enhance the liquidity of a traded security. Amihud and Mendelson (1986) analyze the effect of the bid-ask spreads on asset pricing and predict that the required rate of return on a security is an increasing and a concave piecewise-linear function of the relative bid-ask spread. Based on their model, if liquidity really improves after a listing transfer, an investor

[3] Their study uses four proxies to estimate visibility, the number of analysts estimating the firm's next fiscal year's earning, the number of institutional investors, the percentage of shares held by institution, and the number of citations in the Wall Street Journal.

[4] Amihud, Mendelson, and Uno (1999) also propose that a reduction in the minimum trading unit of shares can increase a firm's investor base and its liquidity.

would require a relatively lower compensation for transaction costs and a relatively lower required rate of return, and then we should be able to observe a rise in the market value of the firm's stock price.

In their earlier empirical studies of the reaction of stock prices to listing changes, Ying, Lewellen, Schlarbaum, and Lease (1977) propose an information-content hypothesis. The listing change decision serves as a signal of the managers' anticipation of the improved future prospects of the firms. Since the listing requirements in an organized market are usually higher than those in the OTC market, the listing transfer decision may signal the market that managers are confident about the firm's ability to meet the higher listing standards. Moreover, as the quantity and quality of security analysis are not equally distributed among stocks, a firm with an undervalued stock may seek to change its listing if its managers feel, that by doing so, they can attract increased scrutiny and attention by the securities analysts. Therefore, it is possible that stock exchange listing transfers may convey other positive information about the firm.

Observing the abnormal returns and trading activities during the listing process also allows us to analyze corporate insiders' behaviors. [5] Prior research on insider trading confirms that inside information helps insiders to earn abnormal returns on their trades. Therefore, if the listing decisions can increase shareholders' wealth and stock prices, we believe that the firm's insiders should be among the first group to increase their accumulations in the stock, prior to the listing change.

Lamba and Khan (1999) address this issue and examine how insiders evaluate the listing or de-listing decision and how they exploit their private information. In analyzing the behavior of insiders around exchange listings and delistings, they find that insiders systematically exploit their private information before exchange listings and de-listings, since they acquire this information before other classes of investors. Their studies offer another explanation for the positive abnormal returns observed around exchange listings.

Despite the many above-listed possible benefits of listing on a seemingly attractive organized exchange, the value of a listing transfer has been under question since many analysts have been reevaluating the traditional attitudes toward exchange listing. For instance, we have observed many huge corporations, such as Microsoft and Intel, who easily qualify to be listed either on the NYSE or on the AMEX, choosing to remain on the NASDAQ, despite meeting higher listing requirements.[6]

In the U.S., new technologies, market dynamics and pricing efficiencies also allow the OTC market to compete vigorously with the NYSE or AMEX in terms of marketing advantages, transaction costs, and trade execution. Also, during the recent past boom in technology stocks, we have observed the appeal of national exchange listing is gradually declining and a significant growth in the NASDAQ system of OTC market worldwide.

We therefore want to further explore the issues of optimal listing strategies and to test whether the securities' trading environment can affect their financial characteristics and stock returns using data obtained in the Taiwanese stock market. The choice of the Taiwanese stock market enables us to further test the proposition that an OTC-to-TSE move can increase its stock value.

The reasons we choose the Taiwanese stock market are twofold. First, the trading volume in the Taiwan stock market is the largest among the emerging markets. Second, its OTC market has just been re-established and therefore provided us with a new dataset to test if the common results usually observed in the U.S. market can also be seen in an important emerging market.

Although the establishment of the Taiwanese OTC market can be traced back as

[5] The SEC defines insiders as corporate officers, directors, and owners of more than 10 percent of a firm's stock.

[6] Aggarwal and Angel (1999) examine why these large firms such as Microsoft and Intel elect not to list.

early as 1954, the trading volume, value, and the number of companies traded have only seen a tremendous increase in recent years. This has also coincided with the increased significance of the market. We believe the results of this research can provide an empirical rationale for managers who are thinking about moving the trading location of their firms' stocks to the TSE. For researchers who are interested in the impact of a listing transfer, this paper complements related research by providing new results from an emerging market.

三、討論與結果

The aim of this paper is to examine the common stock returns and the changes in liquidity effects associated with the switch of stock exchange listings from OTC to TSE in Taiwan over the period of 1992 to 1999. As elsewhere, an abnormal stock return is observed in Taiwan at both the pre-announcement and pre-listing period. The results support the hypothesis that a major stock exchange listing is still a value-increasing action in Taiwan, even though we argue that the difference between the Taiwanese OTC market and the TSE is not as evident as is the case for the U.S markets. Furthermore, we also find that there is evidence of return reversal shortly after listing.

In this paper we also document that the listing transfers do improve trading liquidity significantly. We observe that listing transfers are accompanied by an increase in trading activities and the number of registered shareholders rise as well. However, the effect of listing transfer on trading volume has decreased in recent years. Moreover, the cross-sectional regressions do not provide support for better liquidity as a source of increased value from exchange listing. Although the result is contradictory to the Merton's prediction (1987), this phenomenon deserves further investigation as more OTC firms in Taiwan choose to change their listings to the TSE.

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