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**SHAREHOLDER WEALTH EFFECTS OF INTERNATIONAL
LISTINGS AND DELISTINGS: EVIDENCE FOR FOREIGN
STOCKS ON THE TOKYO STOCK EXCHANGE**

David Sheinberg

A Thesis

in

The Faculty

of

Commerce and Administration

Presented in Partial Fulfilment of the Requirements
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ABSTRACT

SHAREHOLDER WEALTH EFFECTS OF INTERNATIONAL LISTINGS AND DELISTINGS: EVIDENCE FOR FOREIGN STOCKS ON THE TOKYO STOCK EXCHANGE

David Sheinberg

This study provides new evidence of the effects of international listing and delisting on shareholder wealth for U.S. and non-U.S. companies that have listed and subsequently delisted from the Tokyo Stock Exchange. The stock behavior of 81 U.S. and non-U.S. firms between 1973 - 1997 was examined. Four periods were analyzed: (1) the initial announcement of the listing; (2) the actual listing date; (3) the initial announcement of the delisting and (4) the actual delisting date. Previous research on international listing, specifically the Tokyo Stock Exchange, has shown that it is not associated with positive abnormal stock behavior. However, these prior studies have focused on the actual listing date rather than on the initial announcement of the listing. This study also uses cross-sectional regression analysis to see which variables affect the size of the abnormal returns found.

Significantly positive cumulative abnormal returns were found around the time of the listing announcement and significantly negative cumulative abnormal returns were found around the time of the delisting announcement. This evidence is consistent with the market segmentation and management signaling hypotheses. The size of the firm, first time international listing and whether or not the firm had a Japanese subsidiary in place prior to listing provide some explanatory power at the time of the listing, while foreign exchange provides some explanatory power at the time of the delisting.

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I - Introduction

In recent years, firms and investors have sought to exploit opportunities in foreign equity markets in order to diversify their portfolios and earn higher returns than were possible with just a domestic portfolio. The increased demand for equity and diversity has led many firms to list their stocks internationally. There are several benefits and costs that have been said to be associated with international listing. Switzer (1986), Saudagaran (1988) and Mittoo (1992) state that the primary benefits of international listing include: greater access to foreign capital markets, growth of the shareholder base and increased exposure for the firm's products. Some of the benefits company executives believed were associated with listing in Tokyo at the time of their announcement are shown in Appendix III. Some of the major costs associated with international listing include: additional reporting requirements and registration and listing fees.¹

There has been an increasing body of empirical research that has examined the market behavior of stock returns around the date of listing internationally. The reasoning behind this research is to discover if the listing creates value for shareholders. Results from these past studies have been mixed and country dependant. Howe and Kelm (1987) showed for Japan that international listing has a detrimental effect on shareholder wealth, Switzer (1986, 1997) showed that international listing creates value for shareholders. Lee (1991, 1992) showed that international listing does not have an effect on shareholder value.

¹ "In 1993, the annual cost for holding on to a TSE listing for Eastman Kodak was \$ 124,000. Of that, \$35,000 was for fees paid to the law office \$33,000 was for expenses needed to produce a Japanese annual report and other reports for the stock exchange, \$29,000 for an agent's fee for matters related to the payment of dividends and \$ 7,000 for the TSE." Tokyo Business Today, November 1994

The period of the stock price reaction has not been consistent throughout several studies. Howe and Kelm (1987); Alexander et al. (1988) found that there was a reaction around the actual listing date. Reilly et al. (1990) found that stock prices reacted around the application date in addition to the actual date. Lau et al. (1994) found that there was a stock price reaction around the acceptance date in addition to the actual listing date. Miller (1996) and Switzer (1997) found that there was a significant reaction around the first initial announcement of the listing.

In addition to research on domestic and international listing, there has been limited research on domestic delistings in the United States. Sanger and Peterson (1990) find that domestic delistings have an adverse effect on shareholder wealth. They conclude that the decrease was due to the liquidity hypothesis. Shumway (1997) also reports an adverse effect associated with domestic delistings.

One area of research that has not been explored in the literature is international delistings. The Tokyo Exchange, which saw its foreign section grow from 11 firms in 1984 to a peak of 127 firms in 1991 has seen several international delistings in the 1990s. By the beginning of 1998, only 59 foreign firms remained on the exchange. Most of the firms cited low turnover and the cost of listing as reasons to delist.²

² "GM said that it was spending about \$160,000 annually in Japan on only 1,800 shareholders which amounted to just 0.02 percent of its total shareholders." Institutional Investor, January 1993
"Warner Lambert, an American drugs firm counted only 200 Japanese among its shareholders and they hold a tiny stake. In 1991, 4,000 shares were traded each day in Tokyo, now only about 100 change hands there." Economist, September 25, 1993, p. 88

This study presents for the first time an empirical investigation of shareholder wealth effects for common stocks that have been listed and then delisted from the Tokyo Stock Exchange (TSE). Using the standard event-study methodology presented in Brown and Warner (1985), we examine the stock price behavior of 81 firms in the period 1973-1997. Four periods were analyzed: (1) the initial announcement of the listing; (2) the actual listing date; (3) the initial announcement of the delisting and (4) the actual delisting date. We also use cross-sectional regression analysis to investigate if variables such as: international listing experience; Japanese experience; foreign exchange; the size of the firm and book to market equity affect the size of the market reaction.

This study finds a positive and significant market reaction around the initial announcement of international listing. A negative and significant market reaction was found around the initial announcement of international delisting. However, a significant market reaction was not found on the initial announcement dates ($t=0$) for the listing or delisting. The positive (negative) reaction around listing (delisting) is consistent with the market segmentation hypothesis, in addition to management signaling effects. A negative and significant market reaction was found on and around the actual listing date, which is consistent with Reilly et al. (1990) and Lau et al. (1994). Positive and significant cumulative abnormal returns were found prior to the actual delisting date. The size of the firm, first time international and listing experience in Japan shortly before listing and the foreign exchange factor around the time of delisting seem to play an important role in the determination of the abnormal returns.

The remainder of the paper is organized as follows: Section II presents a review of the literature on listings and delistings that relate to the issues explored in this study. Section III describes the data and provides summary statistics of the sample. Section IV states the hypotheses to be tested. Section V states the abnormal return methodology and presents the determinants of the abnormal returns. Section VI presents and interprets the results. Section VII presents a summary and conclusion.

II - Previous Literature

2.1 Domestic Listing

One of the earliest studies to examine whether listing on a national exchange was of value was Van Horne (1970). The study investigated new listings on the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX) from 1960 to 1967. The study showed that there was an increase in firm value surrounding the listing date, but it was concluded that listing was not of value to common shareholders after considering transaction costs and potential biases. Furst (1970) supported Van Horne (1970) concluding that listing was not a thing of value.

Ying, Lewellen, Schlarbaum and Lease (1977) studied new listings on the NYSE and AMEX from 1966 to 1968 and found positive average abnormal returns in the month in which the listing was applied for and actually listed. The study also found negative average abnormal returns in the month preceding the listing. It was concluded that listing was a thing of value. This view was supported by Goulet (1974) and Fabozzi (1981), however it was contrary to the earlier studies by Van Horne(1970) and Furst (1970).

Grammatikos and Papaioannou (1986a) hypothesized that investors expect liquidity gains for less liquid OTC stocks around the announcement of listing on the NYSE (liquidity hypothesis). The study found that low liquidity stocks on the OTC exhibited a positive reaction around the announcement date. This hypothesis was supported by Sanger and McConnell (1986), which examined the impact on stock price for firms that left the OTC market and moved to the NYSE from 1966 to 1977.

The study found a positive and significant reaction to the news that a firm was to be listed in the pre-NASDAQ period. With the introduction of NASDAQ, the reaction of the firms' stock price was smaller and insignificant. It was concluded that the positive and significant reaction in the pre-NASDAQ period was due to the increased liquidity advantage of the NYSE and the introduction of NASDAQ has decreased that advantage.

Grammatikos and Papaioannos (1986b) concluded that the positive reaction in the prelisting period may be taken as a verification of the management's confidence in the firm and can lead to a positive reaction (Management signaling hypothesis). This theory was first introduced by Ying et al. (1977), which interpreted the listing action as the "final credible signal that the firm has arrived." Grammatikos and Papaioannos (1986b) used daily data, unlike most of the previous studies which used weekly or monthly data. They stated that the previous data series may have been too long to capture the market's reaction accurately.

Most of the previous research on domestic listings examined the listing effects of firms that moved their stock from one market to another, eg. OTC to NYSE. Khan et al. (1993) examined the effect of listing on a regional U.S. exchange, while maintaining its listing on a national U.S. exchange (NYSE). They examined the impact of U.S. domestic dual listing of common stocks on shareholder wealth for 137 AMEX and NYSE-listed companies that dually listed their common stocks on the Pacific and Midwest Stock Exchanges from 1984 to 1988. The study found that the market reacts negatively to U.S. domestic dual listings and did not find significant positive returns in the prelisting period. This is a contrast to previous studies on U.S.

domestic listings which found significantly positive prelisting returns. It is suggested that the significantly positive returns in the previous studies might have been attributed to firms listing their common shares after a period of exceptional performance. These results are similar to Howe and Kelm (1987), which found a negative international listing effect.

2.2 International Listing

As with domestic listing studies, international listing studies have also resulted in mixed results. Most of the research on international listing effects have taken one of two approaches. The research has examined: 1) U. S. firms listing on a foreign exchange or 2) foreign firms listing on a U.S. exchange.

Howe and Kelm (1987) were the first to study the valuation effects of U.S. firms cross-listing on a foreign exchange. They examined 165 U.S. firms that listed in Europe, specifically on the Paris, Basel and Frankfurt Stock Exchange, from 1962 to 1985. The study found a significant negative reaction surrounding the application and approval period of listing for the firms' first listing internationally. They found no evidence of negative abnormal returns following listing as most U.S. domestic studies found. There was no significant negative reaction surrounding the second or third listing. Significant negative cumulative abnormal returns (CARs) were found surrounding the listing period for both Basel and Frankfurt Exchanges, however none were found for the Paris Exchange. It was concluded that unlike most U.S. domestic listings, international listings were associated with a negative reaction surrounding the application and approval period of listing. The negative reaction was thought to be attributed to the many costs associated with listing internationally.

In contrast to Howe and Kelm (1987), other studies have found positive prelisting reactions. Reilly et al. (1990) found weak positive abnormal returns around the application period for U.S. firms listing on the Tokyo Exchange and Lau et al. (1994) found positive abnormal returns around the date of acceptance. Both of the latter studies showed negative abnormal returns on the first day of trading.

All of these studies have examined the reaction to U.S. listing abroad, however there have been several studies that have studied foreign firms listing on a U.S. exchange. The first study to take this approach was Switzer (1986). The study investigated 27 Canadian firms that listed on the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) from 1962 to 1983. Positive abnormal returns of approximately 20 percent, on an annualized basis, were found during the period around the listing date.

Alexander et al. (1988) was the first study to examine if the market reaction around international listing was due to market segmentation. A sample of 34 foreign firms that listed on a U.S. exchange (NYSE, AMEX or NASDAQ) was examined from 1969 to 1982 using monthly data. For the sample as a whole, they found positive abnormal returns before the listing date and negative abnormal returns after the listing date. It was concluded that the reaction around the listing date was due to market segmentation. Canadian firms had an insignificant negative reaction in the post-listing period, which could suggest that non-Canadian stock markets are more severely segmented from the U.S. stock market than that of the Canadian stock market.

If international capital markets are believed to be segmented, in the sense that expected returns on risk-equivalent securities can differ in different capital markets, firms will have the incentive to adopt financial policies that can counter the negative effects of such segmentation. The firm can counter the negative effects through: foreign portfolio or direct investment; international merger and acquisition or the international listing of its stock to make its shares more available to a larger investor base, (Stapleton and Subrahmanyam [1977]). If markets are completely integrated, international listing should have no impact on the firm's stock prices.

Several studies have linked stock prices, expected returns and market segmentation with international listing. Errunza and Losq (1985) examined the case of mild segmentation stating that a "super risk premia" is associated with foreign stocks that domestic investors are restricted to own. Restrictions may be due to barriers such as: transactions and information costs, government-imposed controls on foreign exchange and the free flow of capital. Listing foreign stocks in the domestic market expands the investors' opportunity set and reduces this risk premia. Restrictive barriers are removed as: foreign investors can trade the stock in their own currency; lower transaction costs are associated with foreign exchange and information costs are reduced. The reduction of the risk premia should cause the expected returns of the cross-listed stock to fall and stock prices to rise. Errunza and Losq (1985) extended the previous models of Black (1974) and Stulz (1981). Stapleton and Subrahmanyam (1977) considered the situation where markets were completely segmented before cross-listing. They found that the equilibrium market price of a hypothetical stock was observed to be higher when it was internationally listed resulting in a lower expected return. Alexander et al. (1987) formalized a closed-form solution to Stapleton and

Subrahmanyam's model and demonstrated that under reasonable conditions the expected return on a stock should decline when the stock becomes internationally listed.

Foerster and Karolyi (1993) improved on the Alexander et al. (1988) study by examining 49 Canadian firms that internationally listed on a U.S. exchange using daily return data. They found an annualized positive abnormal return of 23% for the 100 days before the listing date. The study also found that there was a significantly negative stock price reaction in the post-listing period. This was in contrast with the earlier study of Alexander et al. (1988) which found an insignificant post-listing effect for Canadian firms. Foerster and Karolyi also observed an insignificant negative post-listing effect for a subsample of Canadian resource firms. They conclude that for the whole sample, the evidence is consistent with financial market segmentation between Canada and the U.S. They also suggest that industry-related factors may also be an important determinant of integration, as the Canadian resource firms exhibited an insignificant post-listing effect. Sundaram and Logue (1996) supported the hypothesis of market segmentation by finding positive valuation effects associated with international listing. The study concluded that the listing reduces the overall effect of segmentation among different national securities markets.

In a recent study on stock behavior surrounding the event of international listing, Switzer (1997) examined the first initial announcement of the listing by Canadian firms listing in the U.S. Previous studies such as Alexander et al. (1988), Switzer (1986) and Foerster and Karolyi (1993) focused on stock price reaction around the actual listing date. These studies did not show significant abnormal returns

on the date of listing. Kadlec and McConnell (1994) state that “in an efficient market, the valuation effects of listing should be incorporated in the stock price at the initial announcement date.” Alexander et al. (1988) state that “both liquidity and signaling effects, if they exist, may cause a firm’s stock price to rise by an abnormal amount around the announcement date of international listing”. Both these statements show that it is critical to examine the announcement date of listing. Switzer found significantly positive abnormal returns on and around the first initial announcement of listing. He concludes that this is consistent with a reduction of the risk premium of firms operating in mildly segmented markets (Market Segmentation Hypothesis). The results are also said to be consistent with shareholder wealth maximization.

In contrast to the above studies, Lee (1992) who examined the effects of international listing between the U.K. and Japan, did not find significant stock price effects around the listing date. In the absence of significant results, the study rejected the hypothesis that capital markets in the U.K. and Japan are segmented. This supported the earlier study of Lee (1991), which also concluded that international listing does not impact shareholder wealth.

2.3 Domestic U.S. Delistings

Early studies on stock delistings by Merjos (1963), O’Donnell (1969) and Edelman and Baker (1987) found negative abnormal returns around the delisting date. Jarrell (1984) was the first study to focus on the announcement day of delisting. The study examined a sample of 6 NYSE firms that were delisted and four that were candidates for delisting for violating rules concerning corporate governance and finds an average loss in firm value of 9 percent.

Sanger and Peterson (1990) extended the Jarrell (1984) study by examining a sample of 520 firms that were delisted from the NYSE or ASE. The study finds that equity values decline by approximately 8.5 percent on the announcement day. They conclude that the results are consistent with the liquidity hypothesis, (Sanger and McConnell [1986]; Grammatikos and Papaioannou [1986a]). The results were not due to management signaling as all the firms in the sample were delisted involuntarily. All firms in the sample were delisted by the exchange. The returns were also consistent with market efficiency, as the decrease was seen around the announcement of the delisting.

Shumway (1997) found results consistent with Sanger and Peterson (1990). Firms that announced a performance-related delisting lost on average 14 percent of their value immediately after the announcement. Most of the delistings were also involuntary.

Unlike the previous two studies, our research will examine firms that delisted voluntarily. Due to this fact, the stock price reaction around the announcement of the Tokyo delistings could include both liquidity and management signaling effects, in addition to market segmentation effects.

III - Sample Data and Statistics

The firms examined in this study consist of U.S. and non-U.S. companies that listed on and later delisted from the Tokyo Stock Exchange over the period 1973 to 1997. Listing and delisting dates of firms from the United States, Canada, France, the United Kingdom, Switzerland, the Netherlands and Sweden were provided by the Tokyo Stock Exchange. Daily returns for U.S. firms are obtained from the CRSP Daily Returns File for common stocks traded on the NYSE; Canadian firm are obtained from the CFMRC database, U.K. firms are obtained from the Financial Times of London and the Bloomberg Database. The remaining firms are obtained from the Bloomberg database. The 30-day U.S and Canadian t-bill rates are also obtained from the Bloomberg database.

An initial sample of 90 firms was examined to see if any should be excluded. The listing and delisting periods were examined as two separate samples. The same criteria for inclusion was used for both samples. Firms were excluded for the following reasons:

- 1) Unavailable stock return data for the estimation and event period
- 2) Listing or delisting due to name change
- 3) Listing or delisting due to restructuring, e.g. merger, acquisition or LBO

A total of 81 firms are identified that satisfy the criteria for inclusion in the listing sample. The distribution of listing firms by year, country of origin and by industry is shown in Appendix I. Sixty U.S. firms are included, which represents 74.07% of the whole sample. Twenty-five firms were originally listed on the TSE in

1987, which represents 30.86% of the whole sample and 69.44% of firms that listed in that year.

A total of 71 firms are identified that satisfy the criteria for inclusion in the delisting sample. The distribution of delisting firms by year, country of origin and by industry is shown in Appendix II. Fifty-one U.S. firms are included, which represents 71.8% of the whole sample. For the period of 1977-1997, 83.1% of the firms were delisted from the TSE after 1992.

For the announcement effect analysis, the earliest public announcements of the firm's intention to list on the TSE were found from Lexis-Nexis. A search of all firm-related news before the listing and delisting dates was performed using Lexis-Nexis in order to find the announcements. As Lexis-Nexis is less complete in earlier years, the Wall Street Journal Index was also used to find announcements.

For the listing sample, 73 out of the 81 firms were found to have an announcement before the actual date of listing. Listing announcements could not be found for most of the firms listed before 1980. The average lead time for the announcements in the whole sample is 60 days. A subsample of U.S. firms had an average lead time of 62 days, while non-U.S. firms had an average lead time of 54 days.

For the delisting sample, all 71 firms were found to have an announcement before the actual date of delisting. The average lead time for the announcements in the whole sample is 72 days. A subsample of U.S. firms had an average lead time of 73 days, while non-U.S. firms had an average lead time of 69 days.

For the cross-sectional regression analysis, data was collected from various sources. Variables such as: market value, book value and common shares outstanding were obtained from the Compustat database, Value Line and Moody's Industrial, Bank and Finance, Public Utility and International Manuals. Information regarding Japanese subsidiaries and stock exchange listings were also attained from those sources. Foreign exchange rates were obtained from International Financial Statistics published monthly by the International Monetary Fund (IMF). Information on other firm attributes such as: international operations in Japan and international stock exchange listings were obtained from Moody's Manuals.

IV – Hypotheses

Throughout this study, several hypotheses will be tested. The first two hypotheses consider the shareholder wealth effects attributed by the initial announcement of 1) international listing and 2) international delisting. Foerster and Karolyi (1993) believed that the actual date of listing was very close to the announcement date, so only the actual listing date was considered. This study shows that the initial announcement date and actual date are substantially different for both listings and delistings (See Section III). This is consistent with Miller (1996) and Switzer (1997). If the market is semi-strong efficient, then the market will react around the time of the initial public announcement and not the actual date itself. This leads us to the first two hypotheses, 1(a) and 1(b):

Hypothesis 1(a): *Abnormal returns around Listing Announcement are expected to be positive*

The decision by U.S. and international firms to list on the Tokyo Stock Exchange should have a positive impact thereby being consistent with the maximization of shareholder wealth. As these markets are completely or mildly segmented, share prices should rise on the announcement of the firm's decision to list its shares in Tokyo due to the reduction of the risk premium. Increased liquidity benefits and managerial signaling may also cause this reaction.

Hypothesis 1 (b): *Abnormal returns around Delisting Announcement are expected to be negative*

The decision by U.S. and international firms to delist from the TSE should have a negative impact on shareholder wealth. If mild market segmentation still exists

at the time of delisting, then the stock price should decrease at the time of the delisting due to the increase in the risk premium. The negative reaction may also be viewed as a negative signal from management with respect to the future international prospects of the firm, which will result in lower share prices.

Prior studies have shown that firms tend to be strong performers before making the announcement to list on an exchange. As firms seeking to list on the Tokyo Stock Exchange have to meet certain criteria (See Appendix IV - Listing Requirements), a survivorship or selection bias might be present. Alexander et al. (1988) and Switzer (1997) test for this bias. Survivorship or selection bias may increase the probability of a Type I error in the analysis due to an overstatement of expected returns from the estimation period. Similar to the studies mentioned above, this study tests whether or not the estimated alpha in the equation: $[(r_i - r_f) = \alpha + (r_m - r_f)\beta + e_i]$, is significantly greater than zero for the listing firms, where $(r_i - r_f)$ is equal to the firm's returns in excess of the risk-free rate and $(r_m - r_f)$ is equal to the excess market returns. The survivorship or selection bias will be tested for the estimation period around the initial listing announcement date and actual date of the listing.

Hypothesis 2(a): Firms listing internationally for the first time should experience greater positive abnormal returns

One might argue that the benefits involved with international listing are greater when the firm lists internationally for the first time. It can be seen as a positive signal from management about the future international prospects of the firm. Doukas and Travlos (1988) found insignificant positive returns for firms expanding internationally for the first time. Howe and Kelm (1987) found greater negative

abnormal returns associated with first time international listings, however this study only looked at the period surrounding the actual listing date.

Hypothesis 2(b): Firms with only one international listing prior to delisting should experience greater negative abnormal returns

It can be argued that the negative effects associated with international delisting are greater when the firm delists its only international listing. It can be seen as a negative signal from management about the future international prospects of the firm.

Hypothesis 3(a): Firms that have operations in Japan prior to listing should experience smaller positive abnormal returns compared to other firms

Firms that already have prior international experience in Japan should benefit less from the listing than a firm without experience. Stapleton and Subrahmanyam (1977) states that firms can counter the negative effects of market segmentation through: foreign portfolio or direct investment; international merger and acquisition or the international listing of its stock to make its shares more available to a larger investor base. If the firm had previous reduced the negative effects of market segmentation through foreign direct investment or an international acquisition in Japan, then the benefits of listing should also be reduced. Doukas & Travlos (1988) found insignificant negative abnormal returns for firms that made acquisitions in countries where they already had operations.

Hypothesis 3(b): Firms that have operations in Japan prior to delisting should experience smaller negative abnormal returns compared to other firms

As it is hypothesized that prior experience in Japan will reduce the benefits of listing internationally, it can be argued that the same prior experience will reduce the negative effects attributed to delisting.

Hypothesis 4(a): Firms listing internationally should benefit when their domestic currency is weak compared to the Japanese Yen

One might argue that the benefits of accessing the Japanese market are greater when the Japanese Yen is strong compared to the firm's domestic currency. Firms' exports to Japan may be more competitive under these conditions, allowing firms to better position themselves to access the Japanese market. A positive and significant relationship between the foreign exchange factor and abnormal returns should be seen at the announcement of listing. Switzer (1997) found the foreign exchange rate variable (Can\$/U.S.\$) to be insignificant and positive in relation to abnormal returns around the announcement of listing.

Hypothesis 4(b): Firms delisting internationally should benefit when their domestic currency is strong compared to the Japanese Yen

One might argue that if it is beneficial to access the Japanese market when the firm's domestic currency is weak compared to the Japanese Yen, then it would be beneficial to exit the Japanese market when the firm's domestic currency is strong compared to the Yen. A significant and positive relationship between the foreign exchange factor and abnormal returns should be seen around the announcement of delisting.

V - Methodology

5.1 Abnormal Return Model

The standard market model as discussed in Brown and Warner (1985) is used to assess the market's response to the announcement of listing and delisting, as well as the actual listing and delisting dates. The benchmark used for the analysis is the market model discussed in Karafiath (1988). This benchmark differs from the traditional market model, as it includes a vector of (0,1) dummy variables to the right-hand side of the market model. The dummy variable is equal to "1" for the days that are included in the event window and "0" for all other days in the estimation period. The traditional event study uses a two step approach: 1) the market model regression parameters are estimated from pre-event data only and 2) abnormal returns and their test statistics are calculated for the event window using regression parameters from the pre-event data and market data from the event window. The dummy variable approach simplifies the traditional approach, as prediction errors and test statistics are provided in one step. The dummy variable approach described above uses t-statistics, however our study will use z-statistics as in Eckbo (1990) and Switzer (1997).

As stated previously, this study analyzes daily returns in contrast to prior studies that analyzed monthly or weekly returns. If markets are semi-strong efficient, an abnormal return should be found on or around the announcement date. Several studies on the shareholder effects of international listings did not analyze this event period, which could contribute to their statistically weak results.

For the period [-120,60], the following model is estimated:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \sum \gamma_{ik} d_k + \varepsilon_{it}$$

where:

R_{it} = the rate of return of firm i on day t ,

R_{mt} = the market rate of return on day t ,

α_i = the intercept for stock i ,

β_i = the measure of systematic risk for stock i ,

ε_{it} = an error term, assumed to be normally, identically distributed with no serial correlation, zero mean, and constant variance,

d_k = is a dummy variable equal to 1 for event date k and 0 otherwise.

The abnormal return earned by firm i on event day k ($AR_{ik} = R_{ik} - E(R_{ik})$) is the estimated coefficient γ_{ik} in the above equation. The average abnormal return for day k , AAR_k is determined as:

$$AAR_k = \left[\frac{1}{N} \right] \sum_{i=1}^N AR_{ik}$$

where N is the number of firms; the cumulative average abnormal return ($CAAR_{dt}$) is

$$CAAR_{dt} = \sum_{k=t_1}^{t_2} AAR_k$$

where dt is the time interval $[t_1, t_2]$.

If the firm returns are not affected by the events of the announcement to list (delist) as well as the actual listing (delisting) date, both AAR_k and $CAAR_{dt}$ should equal zero. In order to find whether they are significantly different from zero, the average standardized abnormal return ($ASAR_k$) and the average standardized cumulative abnormal return ($ASCAR_{dt}$) are calculated as:

$$ASAR_k = \left[\frac{1}{N} \right] \sum_{i=1}^N \frac{AR_{ik}}{S_{ik}}$$

$$ASCAR_{dt} = \sum_{k=t_1}^{t_2} ASAR_k$$

where, for firm *i* on event day *k*, S_{ik} is the estimated standard deviation of γ_{ik} .

Finally, tests of significance are based on the computed Z-statistics

$$Z(AAR_k) = ASAR_k * N^{1/2}$$

$$Z(CAAR_{dt}) = ASCAR_{dt} * N^{1/2}/(t_2 - t_1 + 1)^{1/2}$$

which are based on the assumptions that the standardized abnormal returns are normally and independently distributed across securities and time.

5.2 The Determinants of Abnormal Returns

Cross-sectional regressions are examined to determine if firm specific variables affect the size of the abnormal returns found in the event periods. Most of the prior studies on international listings have not used cross-sectional regression analysis to explain abnormal returns. Five variables are examined: International listing experience; Japanese Experience; Foreign Exchange factor; Size of the firm and Book to Market Equity. These variables will be tested on an individual basis (Univariate Regression) and as a whole (Multivariate Regression) against significant abnormal returns for all four event periods (listing announcement, actual date of listing, delisting announcement and actual date of delisting)

1. FLIST: This variable represents the international listing experience of the firm. For the listing period, it will be defined as a dummy variable equal to 1 if Japan was the firm's **first** international listing and 0 otherwise. For the delisting period, it will be defined as a dummy variable equal to 1 if Japan was the firm's **only** international

listing and 0 otherwise. This variable should have a positive sign in the listing period (Hypothesis 2(a)) and a negative sign in the delisting period (Hypothesis 2(b)).

2. JAPEXP: This variable represents the firm's experience in Japan prior to listing (delisting). It will be defined as a dummy variable equal to 1 if the firm already has prior international experience in Japan and 0 otherwise. This variable should have a negative sign in the listing period (Hypothesis 3(a)) and a negative sign in the delisting period (Hypothesis 3(b)).

3. FOREX: This variable is defined as the strength of the firm's domestic currency relative to the Japanese yen at the time of listing (delisting). The variable is calculated as the difference between currency's average exchange rate for the sample period and the currency's exchange rate for the year of the listing (delisting) divided by the average exchange rate, (Harris & Ravenscraft [1991]). This variable should have a positive sign in the listing period (Hypothesis 4(a)) and a negative sign in the delisting period (Hypothesis 4(b)).

The last two variables (firm size and book to market equity) have been shown in recent studies, (Fama and French [1992,1995]), to well describe the cross-section of average stock returns.

4. BTM: the natural logarithm of the firm's book to market equity ratio. The variable is calculated as the book value of the firm's common equity divided by the value of the firm's market equity (price per share multiplied by the number of shares outstanding) at the end of the fiscal year prior to listing in Japan.

5. SIZE: the natural logarithm of the value of the firm's market equity at the end of the fiscal year prior to the date of the listing (delisting). The variable is calculated as the price per share multiplied by the number of shares outstanding.

The cross-sectional regressions are based on the following model:

$$CAR_{jt} = \alpha_j + \beta_1 FLST_j + \beta_2 JAPEXP_j + \beta_3 FOREX_j + \beta_4 SIZE_j + \beta_5 BTM_j + \varepsilon_j$$

Listing sign: (+) (-) (+) (-) (+)

Delisting Sign: (-) (+) (-) (+) (-)

Where:

CAR_{jt} = Cumulative abnormal returns for event window j

$FLST_j$ = Variable measuring the effect of international listing experience on returns. It takes a value of 1 if Japan was: 1) the firm's first international listing; 2) the firm's only international listing before delisting and 0 otherwise.

$JAPEXP_j$ = Variable measuring the firm's international experience in Japan prior to listing (delisting). It takes a value of 1 if the firm has operations in Japan and 0 otherwise.

$FOREX_j$ = Variable measuring the strength of the firm's domestic currency relative to the Japanese Yen at the time of listing (delisting). Calculated as the difference between currency's average exchange rate for the sample period and the currency's exchange rate for the year of the listing (delisting) divided by the average exchange rate

$SIZE_j$ = firm size, proxied by the natural log of the value of the firm's equity at the end of the fiscal year prior to the time of the listing

BTM_j = the natural log of the firm's book to market equity ratio, where the numerator is calculated as the book value of the firm's common equity in the fiscal year prior to listing in Japan and the denominator is the value of the firm's market equity at the end of the fiscal year prior to the time of listing

VI - Results

6.1 Market Reaction

Four event periods were considered: listing announcement; listing date; delisting announcement and delisting date for analysis of stock behavior. To test for survivorship or selection bias, alphas were estimated for both the listing announcement and listing date. Due to data limitations, only U.S. and Canadian firms were analyzed. An average estimated alpha of .0003 with a t-value of .293 was found for the listing announcement period, while an average estimated alpha of .0004 with a t-value of .315 was found for the period around the listing date. These average estimated alphas are not significantly different from zero, which suggests that survivorship or selection bias is not a problem for U.S. and Canadian firms in this study.

6.1.1 Listing Announcement

It was hypothesized that there should be positive abnormal returns around the announcement date. Tables I to III show the abnormal returns that are obtained in this event period. Small significant positive returns were found for the entire sample, (73 observations), around the announcement date. A positive cumulative abnormal return of about .87% with a z-value of 1.7993, significant at the 10% level, was found during the event window (-5,5). Significance was also found during event window (-5,0) with an abnormal return of about .52% with a z-value of 1.7796, significant at the 10% level. The significantly positive abnormal returns can be attributed to the reduction of the risk premium due to market segmentation, management signaling and liquidity effects.

Significant returns were not found on the announcement day itself for the entire sample or the two sub-samples. The announcement day abnormal return was -.31% with an insignificant z-value of -1.0318 for the entire sample, -.44% with a z-value of -1.4147 for the U.S. sub-sample and .01% with a z-value of .3026 for the non-U.S. sub-sample. This is inconsistent with Switzer (1997) which found significantly positive abnormal returns on the announcement day. The small abnormal returns observed around the initial announcement of the listing may be due to the fact that the trading volume of foreign securities in Japan is very small relative to the firm's domestic stock exchange.

Significant cumulative abnormal returns were also found in event windows (-60,0), (-30,0) and (0,30) for the non-U.S. sub-sample. A significantly positive cumulative abnormal return of 8.76% with a z-value of 5.4616 is found in event window (-60,0). Switzer (1997) also found significantly positive pre-announcement abnormal returns for Canadian firms listing on the New York Stock Exchange (NYSE). A significantly positive cumulative abnormal return of 9.5% with a z-value of 6.5907 was found in event window (-60,0). The study states that the abnormal returns may reflect the fact that higher quality firms are listing on the NYSE as opposed to the American Stock Exchange and NASDAQ, where pre-announcement effects were not found. Switzer (1997) suggests that the pre-announcement abnormal returns were not due to a survivorship or selection bias, as the bias test results for his sample were not significantly different from zero. As all the firms in our sample have to meet the same listing requirements, the pre-announcement abnormal returns may represent a survivorship or selection bias for firms outside North America. This bias

may be present as firms outside North America could not be tested for due to a lack of data.

6.1.2 Listing Date

Semi-strong market efficiency theory states that the market will react quickly to the announcement of public information. The beneficial effects of international listing should be incorporated into the stock prices at the time of the announcement. Prior studies such as Reilly et al. (1990) and Alexander et al. (1988) focused only on the actual listing date. In light of these studies, the period around the actual listing date is analyzed. Tables IV to VI show the abnormal returns that are obtained in this event period.

Significant negative abnormal returns were found around the actual date of listing for the entire sample (81 observations) and the two sub-samples. A small negative abnormal return of -0.35% with a z-value of -1.7902 , significant at the 10% level, was found on the actual listing date ($t=0$) for the entire sample. A significant negative CAR of -0.75% with a z-value of -1.6729 was found in event window $(-5,0)$ for the entire sample. Significant negative CARs were also found in both sub-samples. Event windows: $(0,3)$, $(0,2)$, $(-1,1)$ and $(0,1)$ were significant in the U.S. sub-sample. Event window $(0,3)$ had a CAR of -0.85% with a z-value of -2.0633 , significant at the 5% level. Event windows: $(-10,0)$ and $(-5,0)$ were significant in the non-U.S. sub-sample. Both event window CARs are significantly negative at the 10% level.

These results are consistent with Reilly et al. (1990), who also found negative abnormal returns on and around the first day of trading on the Tokyo Stock Exchange.

Lau et al. (1994) observed negative abnormal returns on the first day of trading for U.S. firms listing abroad. The study also found negative CARs around the actual date of listing on the Tokyo Stock Exchange, specifically a significant negative CAR of -0.68% with a z-value of -2.96 for the event window (1,2).

Previous research on international listings have found significant negative abnormal returns in the post-listing period. This effect was deemed the “Post Listing Puzzle” by McConnell and Sanger (1987). In contrast to prior studies such as: Foerster and Karolyi (1993), Lau et al. (1994) and Switzer (1997), insignificant returns were found for U.S. and non-U.S. firms in the post-listing period.

6.1.3 Delisting Announcement

As prior studies on international listings have shown beneficial effects around the announcement of listing, it has been hypothesized that there would be a negative market reaction around the announcement of international delistings. The few studies on U.S. domestic delistings have shown that the market reacts unfavorably to the announcement of delistings. Most of the domestic delistings were due to financial distress or restructuring and were involuntary. The firms in this study delisted voluntarily and were not due to the reasons stated above. However, a negative reaction is still expected due to market segmentation and management signaling. Tables VII to IX show the abnormal returns that are obtained in this event period.

Significant negative cumulative abnormal returns are observed around the announcement of the delisting. For the entire sample (71 observations), a negative CAR of -0.94% with a z-value of -1.6605 , significant at the 10% level, is observed in

the event window (-10,0). For the U.S. sub-sample, significant negative returns are observed in the (-10,0) and (-10,10) event windows. The (-10,0) event window has a significantly negative CAR of -1.32% with a z-value of -2.0848, which is significant at the 5% level. A negative CAR of -2.58% with a z-value of -2.1032, significant at the 5% level is observed in the (-30,0) event window. The negative returns around the announcement date are consistent with Sanger and Peterson (1990) and Shumway (1997), who both found a negative effect for U.S. domestic delistings. In contrast to these studies, insignificant abnormal returns are found on the announcement date ($t=0$) for the entire sample and the two sub-samples. The significantly negative abnormal returns around the announcement date can be attributed to the additional risk premium due to market segmentation. The negative effects may also be attributed to management signaling effects. The cumulative abnormal returns observed before the announcement date are believed to be due to the leakage of information.

In contrast to the entire sample and the U.S. sub-sample, the non-U.S. sub-sample shows a significant positive abnormal return around the delisting announcement. A significant positive CAR of .93% with a z-value of 1.8062, significant at the 10% level, is observed in the (-2,2) event window. Non-U.S. firm shareholders might view the delisting from Tokyo as a positive decision based on the fact that the disadvantages (high costs, low turnover) outweighed the advantages (broader investment base, increased market visibility).

6.1.4 Delisting Date

In addition to the analysis of the delisting announcement period, the market reaction around the actual delisting date was analyzed. Tables X to XII show the abnormal returns that are obtained in this event period.

A significant and positive cumulative abnormal return is observed for the entire sample and the U.S. sub-sample in the (-60,0) event window. The CAR is 3.18% with a z-value of 1.9292, significant at the 10% level for the entire sample and the CAR is 4.03% with a z-value of 2.2395, significant at the 5% level, for the U.S. sub-sample. The build-up of positive CARs before the delisting date shows that the firms were strong performers after the initial delisting announcement. This may be due to the fact that investors perceive the delisting to be beneficial after becoming more informed of why the decision to delist was made i.e. the disadvantages of high listing costs and low turnover outweigh the advantages of a increased market visibility.

Significantly positive CARs are observed around the delisting date in the non-U.S. subsample in event windows (-1,0), (-1,1), (0,3) and (0,5). Event window (0,3) has a CAR of 1.89% and a z-value of 2.0896, significant at the 5% level. These results are similar to the findings of Reilly et al. (1990) and Lau et al. (1994), where negative abnormal returns were found around the listing date.³

³ As several listing (delisting) announcements fall within the estimation period, it is possible that a large positive (negative) reaction at the announcement could influence the actual listing (delisting) date results. Another dummy could be included in the abnormal return model to capture the announcement effect. However, as our study found small abnormal returns around the listing (delisting) announcement, the actual listing (delisting) results should not be affected.

6.2 Cross-Sectional Regressions

Cross-Sectional univariate and multivariate regressions were performed on significant event windows for all four event periods: 1) listing announcement; 2) listing date; 3) delisting announcement and 4) delisting date. Regressions were run on all the significant event windows, however to conserve space, the event windows most relevant to this study will be shown in Table XIII - XVI. The variables that were tested included: international listing experience (FLST); international experience in Japan (JAPEXP); the foreign exchange factor (FOREX); firm size (SIZE) and book to market equity ratio (BTM).

6.2.1 Listing Announcement

All five variables were tested on the listing announcement event windows (-5,5) and (-5,0). In the univariate regressions, all five variables are observed to be insignificant for both event windows. The BTM variable has the largest r^2 at .02 in event window (-5,5), however it is the opposite sign than hypothesized. All five variables were also insignificant in the multivariate regression analysis. The insignificant results may be due to the very small abnormal returns observed around the listing announcement.

6.2.2 Listing Date

Table XIV presents the univariate and multivariate regression analyses for the listing date. Variables run on the actual listing date event windows show some explanatory value. The SIZE variable in the event window (-1,1) for the U.S. sub-sample is equal to -.87% with a t-value of -2.295, significant at the 1% level. The variable has an explanatory value (r^2) of 8.3%. The SIZE variable also comes up

significant in the non-U.S. subsample in the event window (-10,0), where it equals -1.78% with a t-value of -1.847, significant at the 5% level. It has an explanatory value (r^2) of 16.7%. The negative sign assigned to the SIZE variable shows that larger firms experience larger negative abnormal returns around the listing date. The FLST variable is significant for the U.S. sub-sample in event window (0,1). The FLST variable is observed to be significantly positive and is equal to 1.39% with a t-value of 1.948, significant at the 5% level. This supports hypothesis 2(a), which states that firms should benefit from listing internationally for the first time. For the six event windows, only LD (-5,0) has a negative sign. This is in contrast to Howe and Kelm (1987), which found first time international listings to have negative abnormal returns around the listing date. The JAPEXP variable is significantly negative in event window LDU (-1,1) and LDU (0,1), which suggests that firms that have operations in Japan prior to listing are penalized, which is consistent with hypothesis 3(a).

6.2.3 Delisting Announcement

Table XV presents the univariate and multivariate cross-sectional regression results for delisting announcements. Insignificant variables are observed in univariate regression analysis. For the event window DLA(-10,0), all the variables except for BTM show the expected sign. For the event window DLAU(-10,0), all the variables except for JAPEXP show the expected sign. Event window (-2,2) for the non-U.S. sub-sample (not shown in the tables) shows FLST to be significant and negative in the univariate regression analysis. This is consistent with hypothesis 2(b) which states that greater negative returns should be associated when the firm delists its only international listing. In contrast to the result in the univariate regression analysis,

FLST is insignificant and positive in the multivariate regression analysis for the same event window, which rejects hypothesis 2(b).

In the multivariate regression analysis, FOREX is significant and negative in both event windows. For the event window DLA(-10,0), FOREX is equal to -4.62% with a t-value of -2.215, significant at the 5% level. For the event window DLAU (-10,0), FOREX is equal to -4.23% with a t-value of -1.882, significant at the 10% level. As the firm's domestic currency weakens in relation to the Japanese Yen, the abnormal returns become more negative. This is consistent with hypothesis 4(b) which states that it is beneficial (detrimental) to exit the Japanese market when the domestic currency is strong (weak) in relation to the Japanese Yen.

6.2.4 Delisting Date

Table XVI presents univariate and multivariate regression analysis for the delisting date. Significant variables are observed for the event windows (0,3) and (0,5) in the non-U.S. sample in univariate regression analysis. JAPEXP is positive and significant at the 5% level in both event windows: 4.65% with a t-value of 1.997 for event window (0,3) and 4.61% with a t-value of 2.232 for event window (0,5). This is consistent with hypothesis 3(b) which states that firm's with international experience in Japan will be effected less negatively than firm's without Japanese experience. JAPEXP becomes insignificant in the multivariate regression analysis, however the variable retains its positive sign. In contrast to hypothesis 4(b), FOREX is significantly positive for event window (0,5) in the univariate regression analysis. This would suggest that investors believe it is beneficial to exit the Japanese market when the firm's domestic currency is weak in relation to the Japanese Yen. A strong

Yen may lead Japanese institutional investors to trade shares directly on the firm's domestic stock exchange, which decreases the need for the Japanese listing. This would reduce the negative effects seen at the time of delisting.

VII - Summary and Conclusion

This study provides new evidence of the effects of international listing and delisting on shareholder wealth for U.S. and non-U.S. companies that have listed and subsequently delisted from the Tokyo Stock Exchange. The stock behavior of 81 U.S. and non-U.S. firms between 1973 - 1997 was examined. Four periods were analyzed: (1) the initial announcement of the listing; (2) the actual listing date; (3) the initial announcement of the delisting and (4) the actual delisting date. Previous research on international listing, specifically the Tokyo Stock Exchange, has shown that it is not associated with positive abnormal stock behavior. However, these prior studies have focused on the actual listing date rather on the initial announcement of the listing. This study also uses cross-sectional regression analysis to see which variables affect the size of the abnormal returns found.

Significantly positive cumulative abnormal returns were found around the time of the listing announcement to support the hypothesis that international listing is beneficial to shareholders. This supports the market segmentation hypothesis, as the positive returns are indicative of a reduction of the risk premium. The positive announcement effect may also be due to management signaling and enhanced liquidity. Significantly negative abnormal returns were found around the actual listing date, which is consistent with prior research.

Significantly negative cumulative abnormal returns were found around the announcement of delisting, which is consistent with the market segmentation hypothesis, as the negative returns are indicative of an addition of the risk premium. The negative announcement effect may also be due to management signaling. Significantly positive cumulative returns 60 days prior to the actual delisting date are found for the entire sample and the U.S. sub-sample, which suggests that the negative effect of delisting is not long-term. Positive returns were also found around the actual date of delisting for the non-U.S. subsample.

The cross-sectional regression analysis found that the size of the firm, first time international listing, and whether or not the firm had a Japanese subsidiary in place prior to listing to have some explanatory power at the time of the listing. These variables are consistent with the stated hypotheses, however they are only significant around the actual listing date and not the initial announcement of listing. The foreign exchange variable proved to be significant at the initial announcement of the delisting, which is consistent with the hypothesis which states that it is more beneficial to delist when the domestic currency is stronger than the Yen.

This study has focused on the stock behavior of firms that have listed and subsequently delisted from the Tokyo Stock Exchange. International delistings have not been investigated prior to this study, which leaves several topics open for future investigation. Liquidity effects of international delistings is one topic that can be investigated in the future. Previous studies on international listings have investigated liquidity effects by focusing on the changes in bid-ask spreads, stock return variances and volume. Another topic that can be investigated is the international delistings'

affect on risk and cost of capital. Prior studies on international listings have investigated this topic by focusing on the changes in beta for listing stocks. Finally, this study has focused on the Tokyo Stock Exchange, other world stock exchanges such as: the London Stock Exchange may be analyzed for international delisting effects.

Table I

Effects of Listing U.S. and Non-U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 73 Firms.

Day 0 is the Date of First Announcement of Listing on the TSE.

<u>Day</u>	<u>AR</u>	<u>Z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0013	0.3898	57.53	-10,+10	0.0104	0.7739	56.16
-9	0.0004	0.1994	42.47	-10,0	0.0046	1.2621	52.05
-8	0.0033	1.7595***	49.32	0,+10	0.0027	0.4205	49.32
-7	-0.0033	-1.1698	42.47	-5,+5	0.0087	1.7993***	54.79
-6	-0.0024	-1.3524	32.88	-5,0	0.0052	1.7796***	56.16
-5	0.0015	1.0511	46.58	0,+5	0.0004	0.2355	50.68
-4	0.0028	1.7754	58.9	-3,+3	0.0038	0.8999	50.68
-3	0.0016	1.0162	54.79	-3,0	0.0009	0.7663	53.42
-2	0.0014	0.7388	53.42	0,+3	-0.0002	-0.0917	45.21
-1	0.0011	0.8093	54.79	-2,+2	0.0009	0.3651	56.16
0	-0.0031	-1.0318	45.21	-2,0	-0.0006	0.2981	50.68
1	0.0002	-0.0292	43.84	0,+2	-0.0016	-0.4225	39.73
2	0.0014	-0.7408	47.95	-1,+1	-0.0019	-0.4286	47.95
3	0.0013	0.3329	43.84	-1,0	-0.002	-0.1573	52.05
4	5.25E-06	-0.347	49.32	0,+1	-0.003	-1.0972	39.73
5	0.0006	1.6018	53.42	-30,0	0.0189	1.4335	60.27
6	0.0034	0.2734	49.32	0,+30	-0.0149	-1.4153	38.36
7	-0.0007	0.4869	49.32	-60,0	0.0216	1.5169	50.68
8	0.0001	0.5483	52.05				
9	-0.0011	0.8199	52.05				
10	0.0007	-0.5199	49.32				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table II

Effects of Listing U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 52 Firms.

Day 0 is the Date of First Announcement of Listing on the TSE.

<u>Day</u>	<u>AR</u>	<u>Z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0024	0.9385	59.62	-10,+10	0.0108	0.8774	55.77
-9	0.0012	0.6839	44.23	-10,0	0.0021	0.8666	50
-8	0.0013	0.378	44.23	0,+10	0.0042	0.6144	51.92
-7	-0.0039	-0.9586	42.31	-5,+5	0.0073	1.2892	53.85
-6	-0.0025	-1.2062	36.54	-5,0	0.0035	1.2405	53.85
-5	0.0007	0.8588	42.31	0,+5	-0.0006	-0.0724	44.23
-4	0.0045	2.2137**	61.54	-3,+3	0.0021	0.3808	50
-3	0.0005	0.2865	50	-3,0	-0.0017	-0.017	50
-2	0.0017	0.7331	53.85	0,+3	-0.0007	-0.1867	46.15
-1	0.0005	0.3611	51.92	-2,+2	-5.07E-05	0.0755	57.69
0	-0.0044	-1.4147	40.38	-2,0	-0.0022	-0.185	48.08
1	0.0004	0.6361	48.08	0,+2	-0.0023	-0.5343	38.46
2	0.0017	-0.1094	51.92	-1,+1	-0.0035	-0.8039	46.15
3	0.0016	0.4448	46.15	-1,0	-0.0039	-0.745	48.08
4	-0.0012	-0.2276	51.92	0,+1	-0.004	-1.2399	38.46
5	0.0012	1.4714	51.92	-30,0	0.0125	1.2026	57.69
6	0.0037	0.3893	51.92	0,+30	-0.0055	-0.6557	44.23
7	-0.0005	-0.1934	44.23	-60,0	-0.0051	-0.0761	46.15
8	0.0001	0.5521	50				
9	-0.0001	0.828	48.08				
10	0.0017	-0.3387	51.92				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table III

Effects of Listing Non-U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 21 Firms.

Day 0 is the Date of First Announcement of Listing on the TSE.

<u>Day</u>	<u>AR</u>	<u>Z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	-0.0014	-0.7501	52.38	-10,+10	0.0094	0.5176	57.14
-9	-0.0017	-0.7044	38.1	-10,0	0.0106	0.9894	57.14
-8	0.0084	2.6857*	61.9	0,+10	-0.0011	-0.1829	42.86
-7	-0.002	-0.6725	42.86	-5,+5	0.0123	1.326	57.14
-6	-0.0023	-0.6233	23.81	-5,0	0.0095	1.366	61.9
-5	0.0034	0.6083	57.14	0,+5	0.0029	0.553	66.67
-4	-0.0013	-0.1733	52.38	-3,+3	0.008	1.0786	52.38
-3	0.0041	1.4438	66.67	-3,0	0.0074	1.4554	61.9
-2	0.0007	0.2239	52.38	0,+3	0.0008	0.1227	42.86
-1	0.0024	0.9406	61.9	-2,+2	0.0034	0.5619	52.38
0	0.0001	0.3026	57.14	-2,0	0.0033	0.847	57.14
1	-0.0005	-1.0553	33.33	0,+2	0.0003	0.0531	42.86
2	0.0007	-1.2091	38.1	-1,+1	0.002	0.4658	52.38
3	0.0005	-0.0792	38.1	-1,0	0.0025	0.8791	61.9
4	0.0029	-0.2887	42.86	0,+1	-0.0004	-0.0946	42.86
5	-0.0008	0.6711	57.14	-30,0	0.0348	2.0053**	66.67
6	0.0025	-0.103	42.86	0,+30	-0.0381	-3.2959*	23.81
7	-0.0013	1.2121	61.9	-60,0	0.0876	5.4616*	61.9
8	5.57E-05	0.1536	57.14				
9	-0.0034	0.2257	61.9				
10	-0.0018	-0.4363	42.86				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table IV

Effects of Listing U.S. and Non-U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 81 Firms.

Day 0 is the Actual Date of Listing on the TSE.

<u>Day</u>	<u>AR</u>	<u>Z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0025	1.3742	54.32	-10,+10	-0.0054	-0.4488	44.44
-9	-0.0016	-0.9625	43.21	-10,0	-0.008	-1.2906	38.27
-8	-0.0022	-1.0893	38.27	0,+10	-0.001	-0.4671	45.68
-7	0.0015	1.1858	41.98	-5,+5	-0.0071	-1.272	44.44
-6	-0.0006	-0.6907	39.51	-5,0	-0.0076	-1.6729***	34.57
-5	-0.0015	-0.8276	38.27	0,+5	-0.0032	-0.7803	41.98
-4	-0.0038	-2.0191**	46.91	-3,+3	-0.004	-0.831	44.44
-3	0.0008	0.7703	51.85	-3,0	-0.0023	-0.6256	45.68
-2	2.77E-05	0.2005	49.38	0,+3	-0.0053	-1.3689	35.8
-1	0.0005	-0.4317	45.68	-2,+2	-0.0046	-1.3391	45.68
0	-0.0036	-1.7902***	38.27	-2,0	-0.0031	-1.1671	39.51
1	-0.0004	0.9153	44.44	0,+2	-0.0052	-1.5953	40.74
2	-0.0012	1.7511***	49.38	-1,+1	-0.0035	-1.3899	39.51
3	-0.0001	-1.2088	39.51	-1,0	-0.0031	-1.5711	45.68
4	6.99E-06	-0.4399	49.38	0,+1	-0.004	-1.397	37.04
5	0.0021	-0.6556	45.68	-30,0	-0.0023	-0.1382	55.56
6	-0.0015	1.1788	51.85	0,+30	0.0004	-0.0994	45.68
7	0.0003	-0.3523	45.68	-60,0	-0.0118	-0.6927	48.15
8	-0.0008	0.0254	38.27				
9	0.0023	-0.7875	48.15				
10	0.002	-0.1855	46.91				

* significant at the 1% level

** significant at the 5% level

*** significant at the 10% level

Table V

Effects of Listing U.S. in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 60 Firms.

Day 0 is the Date of Actual Listing on the TSE.

<u>Day</u>	<u>AR</u>	<u>z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0043	2.2986**	58.33	-10,+10	-0.0027	-0.1831	46.67
-9	-0.0019	-0.7389	45	-10,0	-0.0052	-0.4979	43.33
-8	-0.002	-0.7153	40	0,+10	-0.0006	-0.3097	41.67
-7	0.0014	1.0308	38.33	-5,+5	-0.0062	-0.8946	45
-6	-0.0017	-1.3054	40	-5,0	-0.0054	-0.9067	38.33
-5	-0.0009	-0.2281	41.67	0,+5	-0.0039	-0.819	36.67
-4	-0.0042	-1.9505***	50	-3,+3	-0.0057	-1.1301	41.67
-3	0.0021	1.2816	53.33	-3,0	-0.0002	-0.0212	50
-2	0.0003	0.362	53.33	0,+3	-0.0086	-2.1038**	33.33
-1	0.0006	-0.426	48.33	-2,+2	-0.0064	-1.6268	46.67
0	-0.0031	-1.2599	40	-2,0	-0.0023	-0.7644	38.33
1	-0.0028	1.6945***	50	0,+2	-0.0073	-2.0633**	36.67
2	-0.0013	0.9677	43.33	-1,+1	-0.0054	-1.7961***	35
3	-0.0013	-0.6167	40	-1,0	-0.0026	-1.1922	48.33
4	0.0007	-0.8959	50	0,+1	-0.006	-1.8985***	31.67
5	0.004	-0.1707	45	-30,0	-0.0021	-0.1243	60
6	-0.0012	2.068**	51.67	0,+30	-0.0008	-0.1884	43.33
7	-0.0006	0.1336	50	-60,0	-0.0127	-0.8295	46.67
8	0.0001	-0.6339	36.67				
9	0.0014	-0.8888	45				
10	0.0036	-1.425	43.33				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table VI

Effects of Listing Non-U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 21 Firms.

Day 0 is the Date of Actual Listing on the TSE.

<u>Day</u>	<u>AR</u>	<u>Z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	-0.0026	-1.1864	42.86	-10,+10	-0.0131	-1.2075	38.1
-9	-0.0009	-0.6414	38.1	-10,0	-0.0158	-1.6931***	23.81
-8	-0.0027	-0.9302	33.33	0,+10	-0.0022	-0.3933	57.14
-7	0.0018	0.5864	52.38	-5,+5	-0.0099	-0.9861	42.86
-6	0.0025	0.8501	38.1	-5,0	-0.0138	-1.753***	23.81
-5	-0.0032	-1.2398	28.57	0,+5	-0.001	-0.1481	57.14
-4	-0.0024	-0.6685	38.1	-3,+3	0.0009	0.2782	52.38
-3	-0.0029	-0.6534	47.62	-3,0	-0.0082	-1.1928	33.33
-2	-0.0007	-0.2182	38.1	0,+3	0.0042	0.8677	42.86
-1	0.0003	-0.1276	38.1	-2,+2	0.0005	0.1199	42.86
0	-0.0049	-1.3863	33.33	-2,0	-0.0053	-1.0001	42.86
1	0.0065	-1.0665	28.57	0,+2	0.0009	0.3544	52.38
2	-0.0007	1.8034***	66.67	-1,+1	0.0019	0.3063	52.38
3	0.0033	-1.33	38.1	-1,0	-0.0045	-1.0705	38.1
4	-0.0018	0.6504	47.62	0,+1	0.0016	0.4654	52.38
5	-0.0033	-0.999	47.62	-30,0	-0.0028	-0.1779	42.86
6	-0.0025	-1.1805	52.38	0,+30	0.0035	0.1553	52.38
7	0.0027	-0.9177	33.33	-60,0	-0.0094	-0.3021	52.38
8	-0.0036	1.1214	42.86				
9	0.0048	-0.0442	57.14				
10	-0.0026	2.0445**	57.14				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table VII

Effects of Delisting U.S. and Non-U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 71 Firms.

Day 0 is the Date of First Announcement of Delisting on the TSE.

<u>Day</u>	<u>AR</u>	<u>z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0022	1.081	47.89	-10,+10	-0.0122	-0.8766	39.44
-9	-0.0014	-0.3851	46.48	-10,0	-0.0094	-1.6605***	38.03
-8	-0.0008	-1.3849	42.25	0,+10	-0.0022	-0.4974	43.66
-7	-0.0044	-1.8441***	43.66	-5,+5	-0.0029	-0.5878	46.48
-6	-0.0028	-1.9094***	36.62	-5,0	-0.0022	-0.4076	46.48
-5	-0.0006	-0.031	49.3	0,+5	-0.0001	-0.2677	47.89
-4	-0.0004	-0.0326	40.85	-3,+3	-0.0017	-0.2466	53.52
-3	-0.0008	-0.7236	47.89	-3,0	-0.0011	-0.4675	43.66
-2	0.0003	0.126	56.34	0,+3	-8.9E-06	0.289	49.3
-1	-0.0013	-0.6327	45.07	-2,+2	0.0001	0.0387	49.3
0	0.0006	0.2953	46.48	-2,0	-0.0004	-0.122	42.25
1	0.0011	0.8827	52.11	0,+2	0.0011	0.3425	50.7
2	-0.0006	-1.0687	47.89	-1,+1	0.0004	0.2791	49.3
3	-0.0011	0.3424	47.89	-1,0	-0.0007	-0.2385	50.7
4	4.21E-05	-0.3357	49.3	0,+1	0.0016	0.7892	52.11
5	-0.0002	-0.8148	47.89	-30,0	-0.0175	-1.3297	40.85
6	-0.002	-0.8834	46.48	0,+30	0.0006	0.1262	52.11
7	-0.0016	-0.3502	39.44	-60,0	-0.0107	-1.2879	43.66
8	0.0005	-0.0153	47.89				
9	-0.0019	-0.5229	42.25				
10	0.0029	0.8208	54.93				

* significant at the 1% level

** significant at the 5% level

*** significant at the 10% level

Table VIII

Effects of Delisting U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 51 Firms.

Day 0 is the Date of First Announcement of Delisting on the TSE.

<u>Day</u>	<u>AR</u>	<u>z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.002	0.752	45.1	-10,+10	-0.0226	-1.6555***	29.41
-9	-0.0016	-0.2602	47.06	-10,0	-0.0132	-2.0848**	33.33
-8	-0.0016	-1.2872	45.1	0,+10	-0.0087	-1.3491	39.22
-7	-0.0039	-1.5324	41.18	-5,+5	-0.0085	-1.5072	41.18
-6	-0.0023	-1.3926	43.14	-5,0	-0.0059	-1.3039	41.18
-5	-0.0015	-0.553	45.1	0,+5	-0.002	-0.618	47.06
-4	-0.001	-0.5224	39.22	-3,+3	-0.0037	-0.8543	49.02
-3	3.53E-05	-0.4725	49.02	-3,0	-0.0034	-1.0593	43.14
-2	-0.0024	-1.1134	50.98	0,+3	0.0004	0.0747	49.02
-1	-0.0017	-0.8238	41.18	-2,+2	-0.0035	-1.0854	43.14
0	0.0007	0.2912	50.98	-2,0	-0.0035	-0.9504	37.25
1	0.0006	0.3175	49.02	0,+2	0.0006	-0.2828	50.98
2	-0.0007	-1.3655	45.1	-1,+1	-0.0004	-0.2785	43.14
3	-0.0002	0.2612	49.02	-1,0	-0.001	-0.3767	47.06
4	-0.0006	-0.4797	47.06	0,+1	0.0012	0.2414	47.06
5	-0.0018	-1.6943***	43.14	-30,0	-0.0258	-2.1032**	35.29
6	-0.0034	-0.9415	43.14	0,+30	-0.0037	-0.1623	49.02
7	-0.0024	-0.7216	33.33	-60,0	-0.0059	-1.3341	39.22
8	0.0007	0.6393	49.02				
9	-0.0031	-0.8313	41.18				
10	0.0014	0.0503	50.98				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table IX

Effects of Delisting Non-U.S. Firms in Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 20 Firms.

Day 0 is the Date of First Announcement of Listing on the TSE.

<u>Day</u>	<u>AR</u>	<u>z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0027	0.8359	55	-10,+10	0.0142	1.0588	65
-9	-0.0009	-0.3101	45	-10,0	0.0002	0.2381	50
-8	0.0011	-0.5538	35	0,+10	0.0144	1.2172	55
-7	-0.0059	-1.0275	50	-5,+5	0.0114	1.2993	60
-6	-0.0041	-1.3737	20	-5,0	0.0072	1.3142	60
-5	0.0015	0.8248	60	0,+5	0.0046	0.4825	50
-4	0.0011	0.7728	45	-3,+3	0.0033	0.8996	65
-3	-0.0028	-0.6089	45	-3,0	0.0047	0.8107	45
-2	0.0073	2.0153**	70	0,+3	-0.0011	0.4252	50
-1	-0.0002	0.1235	55	-2,+2	0.0093	1.8062***	65
0	0.0004	0.0915	35	-2,0	0.0075	1.2877	55
1	0.0023	1.1562	60	0,+2	0.0023	1.097	50
2	-0.0004	0.1669	55	-1,+1	0.0024	0.9707	65
3	-0.0033	0.228	45	-1,0	0.0002	0.1521	60
4	0.0018	0.1335	55	0,+1	0.0026	1.1015	65
5	0.0039	1.1705	60	-30,0	0.0039	0.6427	55
6	0.0015	-0.1609	55	0,+30	0.0118	0.862	60
7	0.0005	0.4926	55	-60,0	-0.0227	-1.1699	55
8	-7.3E-05	-1.0497	45				
9	0.0013	0.3423	45				
10	0.0066	1.4663	65				

* significant at the 1% level

** significant at the 5% level

*** significant at the 10% level

Table X

**Effects of Delisting U.S. and Non-U.S. Firms from Tokyo: Market Model
Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 71 Firms.**

Day 0 is the Date of Actual Delisting on the TSE.

<u>Day</u>	<u>AR</u>	<u>z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0032	1.8934***	61.76	-10,+10	0.0047	0.4659	57.35
-9	-0.0025	-1.2292	38.24	-10,0	0.0013	0.6655	51.47
-8	-0.0006	-0.9126	42.65	0,+10	0.0047	0.7667	58.82
-7	-4.93E-05	0.2536	45.59	-5,+5	0.0055	1.4018	60.29
-6	-0.0011	-1.0605	45.59	-5,0	0.0025	1.332	54.41
-5	0.0009	0.6664	55.88	0,+5	0.0044	0.9369	52.94
-4	0.0008	0.9645	47.06	-3,+3	0.0046	1.1028	54.41
-3	0.0008	1.0304	51.47	-3,0	0.0007	0.8159	47.06
-2	-0.0015	-0.8951	42.65	0,+3	0.0052	1.0971	52.94
-1	0.0001	0.5881	55.88	-2,+2	0.0009	0.3455	47.06
0	0.0014	0.9083	50	-2,0	-1.04E-05	0.3472	41.18
1	0.0011	0.435	54.41	0,+2	0.0023	0.6232	51.47
2	-0.0002	-0.2636	45.59	-1,+1	0.0026	1.1246	50
3	0.0029	-0.2403	48.53	-1,0	0.0015	1.0581	50
4	0.0006	-0.967	44.12	0,+1	0.0025	0.9614	55.88
5	-0.0014	1.284	54.41	-30,0	0.008	0.7264	61.76
6	0.0032	-0.3995	47.06	0,+30	0.0167	0.7563	55.88
7	-0.001	0.5002	42.65	-60,0	0.0318	1.9292***	61.76
8	-0.0017	1.1148	54.41				
9	-0.0005	-0.2802	45.59				
10	0.0003	0.4514	52.94				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table XI

Effects of Delisting U.S. Firms from Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 51 Firms.

Day 0 is the Date of Actual Delisting on the TSE.

<u>Day</u>	<u>AR</u>	<u>z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0014	0.7478	55.1	-10,+10	0.0049	0.3345	57.14
-9	-0.0027	-1.1811	38.78	-10,0	0.0009	0.4046	51.02
-8	0.0003	-0.6888	40.82	0,+10	0.0039	0.3011	55.1
-7	0.0006	0.7043	51.02	-5,+5	0.0036	0.9157	55.1
-6	-0.0022	-1.1188	46.94	-5,0	0.0036	1.1751	57.14
-5	-2.67E-05	0.173	48.98	0,+5	-5.72E-05	0.0643	44.9
-4	0.0017	1.234	51.02	-3,+3	0.0018	0.55	48.98
-3	0.0025	1.5669	57.14	-3,0	0.0019	0.7357	44.9
-2	-0.0007	-0.299	42.86	0,+3	-0.0002	-8.70E-03	46.94
-1	0.0001	0.2047	61.22	-2,+2	-0.0015	-0.1358	42.86
0	-0.0001	-1.23E-03	44.9	-2,0	-0.0007	-0.0551	36.73
1	0.0011	0.5944	57.14	0,+2	-0.001	-0.1209	46.94
2	-0.0019	0.2134	44.9	-1,+1	0.001	0.2956	48.98
3	0.0008	0.4973	53.06	-1,0	1.11E-05	0.1439	46.94
4	0.0018	-1.1558	38.78	0,+1	0.0009	0.2174	53.06
5	-0.0017	0.6919	53.06	-30,0	0.0118	0.8102	65.31
6	0.0019	-0.6762	44.9	0,+30	0.0134	0.6536	53.06
7	-0.0014	0.8511	40.82	-60,0	0.0403	2.2395**	63.27
8	0.0007	0.192	51.02				
9	0.0005	-0.5168	44.9				
10	0.0023	0.3086	53.06				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table XII

Effects of Delisting Non-U.S. Firms from Tokyo: Market Model Abnormal Returns (AR), Cumulative Abnormal Returns (CAR), 20 Firms.

Day 0 is the Date of Actual Delisting on the TSE.

<u>Day</u>	<u>AR</u>	<u>z</u>	<u>Percent Positive</u>	<u>Window Interval</u>	<u>CAR</u>	<u>z-CAR</u>	<u>Percent Positive</u>
-10	0.0078	2.3811**	78.95	-10,+10	0.0041	0.8047	57.89
-9	-0.0019	-0.4287	36.84	-10,0	0.0024	0.6094	52.63
-8	-0.0029	-0.6203	47.37	0,+10	0.0069	0.9669	68.42
-7	-0.0017	-0.6512	31.58	-5,+5	0.0104	1.1813	73.68
-6	0.0015	-0.2095	42.11	-5,0	-0.0005	0.6327	47.37
-5	0.0033	0.9828	73.68	0,+5	0.016	1.6692***	73.68
-4	-0.0016	-0.157	36.84	-3,+3	0.0116	1.203	68.42
-3	-0.0039	-0.5671	36.84	-3,0	-0.0022	0.362	52.63
-2	-0.0037	-1.2132	42.11	0,+3	0.0189	2.0896**	68.42
-1	0.0002	0.7839	42.11	-2,+2	0.0073	0.8717	57.89
0	0.0051	1.7203	63.16	-2,0	0.0017	0.7454	52.63
1	0.0013	-0.1316	47.37	0,+2	0.0108	1.3732	63.16
2	0.0044	-0.8414	47.37	-1,+1	0.0067	1.6527***	52.63
3	0.0082	-1.2533	36.84	-1,0	0.0053	1.7708***	57.89
4	-0.0024	0.0267	57.89	0,+1	0.0064	1.4698	63.16
5	-0.0005	1.318	57.89	-30,0	-0.0021	0.5105	52.63
6	0.0065	0.33	52.63	0,+30	0.0252	1.0212	63.16
7	0.0002	-0.4205	47.37	-60,0	0.0099	1.1292	57.89
8	-0.0079	1.8006***	63.16				
9	-0.0031	0.2999	47.37				
10	-0.0048	0.3583	52.63				

- * significant at the 1% level
- ** significant at the 5% level
- *** significant at the 10% level

Table XIII

Cross-Sectional Analysis of the Abnormal Returns to U.S and Non-U.S. Firms Listing on the Tokyo Stock Exchange

The dependant variable is the significant cumulative abnormal return in an event window associated with the announcement of the listing of a firm on the Tokyo Stock Exchange. The entire sample consists of 73 observations from 1973-91 (t-statistics are shown in parentheses)

$$CAR_{jt} = \alpha_j + \beta_1 FLST_j + \beta_2 JAPEXP_j + \beta_3 FOREX_j + \beta_4 SIZE_j + \beta_5 BTM_j + \varepsilon_j$$

<u>Univariate Regression</u>			<u>Multivariate Regression</u>		
Event Window	LA (-5,5)	LA (-5,0)	Event Window	LA (-5,5)	LA (-5,0)
FLST	-.0151 (-1.086)	-.0027 (-.218)	Constant	.024 (.416)	-.0005 (-.01)
r ²	.016	.001	FLST	-.0143 (-.938)	-.0059 (-.430)
JAPEXP	-.0099 (-.835)	-.0114 (-1.101)	JAPEXP	-.0168 (-1.329)	-.0121 (-1.057)
r ²	.01	.017	FOREX	.0268 (.997)	-.0165 (-.681)
FOREX	.023 (.924)	-.0189 (-.863)	SIZE	-.0002 (-.03)	.0007 (.118)
r ²	.012	.01	BTM	-.0144 (-1.491)	-.0018 (-.209)
SIZE	.0028 (.444)	.0016 (.3)	F-Stat	.993	.391
r ²	.003	.001	r ²	.072	.03
BTM	-.0107 (-1.165)	-.001 (-.126)	N	73	73
r ²	.02	0			
N	73	73			

LA: Listing Announcement for the Entire Sample
 *, **, *** shows significance at the 1%, 5%, 10% levels.

FLST_j = Variable measuring the effect of international listing experience on returns. It takes a value of 1 if Japan was the firm's first international listing and 0 otherwise.

JAPEXP_j = Variable measuring the firm's international experience in Japan prior to listing. It takes a value of 1 if the firm has operations in Japan and 0 otherwise.

FOREX_j = Variable measuring the strength of the firm's domestic currency relative to Japanese Yen at the time of listing. Calculated as the difference between currency's average exchange rate for the sample period and the currency's exchange rate for the year of the listing divided by the average exchange rate

SIZE_j = firm size, proxied by the natural log of the value of the firm's equity at the end of the fiscal year prior to the time of the listing

BTM_j = the natural log of the firm's book to market equity ratio, where the numerator is calculated as the book value of the firm's common equity in the fiscal year prior to listing in Japan and the denominator is the value of the firm's market equity at the end of the fiscal year prior to the time of listing

Table XIV

Cross-Sectional Analysis of the Abnormal Returns to U.S and Non-U.S. Firms Listing on the Tokyo Stock Exchange

The dependant variable is the significant cumulative abnormal return in an event window associated with the actual date of the listing of a firm on the Tokyo Stock Exchange. The entire sample consists of 81 observations from 1973-91 (t-statistics are shown in parentheses)

$$CAR_{jt} = \alpha_j + \beta_1 FLST_j + \beta_2 JAPEXP_j + \beta_3 FOREX_j + \beta_4 SIZE_j + \beta_5 BTM_j + \epsilon_j$$

<u>Univariate Regression</u>			<u>Multivariate Regression</u>		
Event Window	LDU (-1,1)	LDU (0,1)	Event Window	LDU (-1,1)	LDU (0,1)
FLST	.0063 (.729)	.0139 (1.948)***	Constant	.0756 (2.074)**	-.0015 (-.048)
r ²	.009	.061	FLST	-.0015 (-.165)	.0103 (1.326)
JAPEXP	-.0166 (-2.203)**	-.0129 (-2.001)**	JAPEXP	-.0133 (-1.716)***	-.0112 (-1.682)***
r ²	.077	.065	FOREX	-.0088 (-.669)	-.0107 (-.944)
FOREX	.0017 (.148)	-.0132 (-1.38)	SIZE	-.0086 (-2.025)**	-.0005 (-.143)
r ²	0	.032	BTM	.0055 (.644)	.001 (.133)
SIZE	-.0087 (-2.295)**	-.0014 (-.406)	F-Stat	1.916	1.596
r ²	.083	.003	R ²	.151	.129
BTM	.007 (.859)	-.0001 (-.008)	N	60	60
r ²	.013	0			
N	60	60			

LDU: Actual Listing Date for the U.S. Sample

*, **, *** shows significance at the 1%, 5%, 10% levels.

FLST_j = Variable measuring the effect of international listing experience on returns. It takes a value of 1 if Japan was the firm's first international listing and 0 otherwise.

JAPEXP_j = Variable measuring the firm's international experience in Japan prior to listing. It takes a value of 1 if the firm has operations in Japan and 0 otherwise.

FOREX_j = Variable measuring the strength of the firm's domestic currency relative to Japanese Yen at the time of listing. Calculated as the difference between currency's average exchange rate for the sample period and the currency's exchange rate for the year of the listing divided by the average exchange rate

SIZE_j = firm size, proxied by the natural log of the value of the firm's equity at the end of the fiscal year prior to the time of the listing

BTM_j = the natural log of the firm's book to market equity ratio, where the numerator is calculated as the book value of the firm's common equity in the fiscal year prior to listing in Japan and the denominator is the value of the firm's market equity at the end of the fiscal year prior to the time of listing

Table XV

Cross-Sectional Analysis of the Abnormal Returns to U.S and Non-U.S. Firms Delisting from the Tokyo Stock Exchange

The dependant variable is the significant cumulative abnormal return in an event window associated with the announcement of the delisting of a firm from the Tokyo Stock Exchange. The entire sample consists of 71 observations from 1977-97 (t-statistics are shown in parentheses)

$$CAR_{jt} = \alpha_j + \beta_1 FLST_j + \beta_2 JAPEXP_j + \beta_3 FOREX_j + \beta_4 SIZE_j + \beta_5 BTM_j + \varepsilon_j$$

<u>Univariate Regression</u>			<u>Multivariate Regression</u>		
Event Window	DLA (-10,0)	DLAU (-10,0)	Event Window	DLA (-10,0)	DLAU (-10,0)
FLST	-.00015 (-.012)	-.0123 (-1.061)	Constant	.02271 (.448)	.0069 (.125)
r ²	0	.022	FLST	-.0113 (-.821)	-.0213 (-1.53)
JAPEXP	.00462 (.45)	-.0032 (-.312)	JAPEXP	.0089 (.889)	-.0057 (-.543)
r ²	.003	.002	FOREX	-.0462 (-2.215)**	-.0423 (-1.882)***
FOREX	-.0304 (-1.472)	-.0289 (-1.492)	SIZE	-.0052 (-.902)	-.0026 (-.428)
r ²	.03	.043	BTM	.00177 (.236)	.0014 (.152)
SIZE	.00264 (.544)	.0029 (.574)	F-Stat	1.20	.999
r ²	.004	.007	R ²	.086	.1
BTM	.00199 (.301)	-.0002 (-.02)	N	71	51
r ²	.001	0			
N	71	51			

DLA: Delisting Announcement for the Entire Sample
 DLAU: Delisting Announcement for the U.S. Sample
 *, **, *** shows significance at the 1%, 5%, 10% levels.

FLST_j = Variable measuring the effect of international listing experience on returns. It takes a value of 1 if Japan was the firm's only international listing and 0 otherwise.
 JAPEXP_j = Variable measuring the firm's international experience in Japan prior to delisting. It takes a value of 1 if the firm has operations in Japan and 0 otherwise.
 FOREX_j = Variable measuring the strength of the firm's domestic currency relative to Japanese Yen at the time of delisting. Calculated as the difference between currency's average exchange rate for the sample period and the currency's exchange rate for the year of the delisting divided by the average exchange rate
 SIZE_j = firm size, proxied by the natural log of the value of the firm's equity at the end of the fiscal year prior to the time of the delisting
 BTM_j = the natural log of the firm's book to market equity ratio, where the numerator is calculated as the book value of the firm's common equity in the fiscal year prior to delisting in Japan and the denominator is the value of the firm's market equity at the end of the fiscal year prior to the time of delisting

Table XVI

Cross-Sectional Analysis of the Abnormal Returns to U.S and Non-U.S. Firms Delisting from the Tokyo Stock Exchange

The dependant variable is the significant cumulative abnormal return in an event window associated with the actual date of delisting of a firm from the Tokyo Stock Exchange. The entire sample consists of 71 observations from 1977-97 (t-statistics are shown in parentheses)

$$CAR_{jt} = \alpha_j + \beta_1 FLST_j + \beta_2 JAPEXP_j + \beta_3 FOREX_j + \beta_4 SIZE_j + \beta_5 BTM_j + \varepsilon_j$$

<u>Univariate Regression</u>			<u>Multivariate Regression</u>		
Event Window	DLDI (0,3)	DLDI (0,5)	Event Window	DLDI (0,3)	DLDI (0,5)
FLST	.0172 (.465)	.0215 (.645)	Constant	-.0052 (-.033)	.0087 (.065)
r ²	.013	.024	FLST	.024 (.46)	.0327 (.747)
JAPEXP	.0465 (1.997)**	.0461 (2.232)**	JAPEXP	.0348 (.884)	.0183 (.555)
r ²	.19	.227	FOREX	.0659 (.785)	.0866 (1.23)
FOREX	.0757 (1.29)	.0984 (1.949)***	SIZE	.0028 (.149)	.0026 (.171)
r ²	.089	.183	BTM	.0046 (.247)	-.0061 (-.388)
SIZE	-.0001 (-.002)	.0064 (.649)	F-Stat	.703	1.251
r ²	0	.024	r ²	.227	.343
BTM	-.0107 (-.867)	-.018 (-1.708)***	N	21	21
r ²	.045	.154			
N	21	21			

DLDI: Actual Delisting Date for the Non-U.S. Sample
 *, **, *** shows significance at the 1%, 5%, 10% levels.

FLST_j = Variable measuring the effect of international listing experience on returns. It takes a value of 1 if Japan was the firm's only international listing and 0 otherwise.
 JAPEXP_j = Variable measuring the firm's international experience in Japan prior to delisting. It takes a value of 1 if the firm has operations in Japan and 0 otherwise.
 FOREX_j = Variable measuring the strength of the firm's domestic currency relative to Japanese Yen at the time of delisting. Calculated as the difference between currency's average exchange rate for the sample period and the currency's exchange rate for the year of the delisting divided by the average exchange rate
 SIZE_j = firm size, proxied by the natural log of the value of the firm's equity at the end of the fiscal year prior to the time of the delisting
 BTM_j = the natural log of the firm's book to market equity ratio, where the numerator is calculated as the book value of the firm's common equity in the fiscal year prior to delisting in Japan and the denominator is the value of the firm's market equity at the end of the fiscal year prior to the time of delisting

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APPENDIX I

Distribution of the Listing Events by Year, Country of Origin and Industry

Panel A. Year of Listing

<u>Year</u>	<u>Number of Observations</u>
1973	4
1974	5
1975	2
1984	2
1985	4
1986	15
1987	25
1988	14
1989	8
1990	1
1991	1

Panel B. Country of Origin

<u>Country</u>	<u>Number of Observations</u>
United States	60
United Kingdom	12
Canada	5
Netherlands	2
Australia	1
Sweden	1

Panel C. Industry of Affiliation

<u>Industry</u>	<u>Number of Observations</u>
Chemicals	13
Commerce	6
Communication	9
Electric Appliances	5
Electric Power & Gas	4
Finance & Insurance	10
Foods	8
Oil and Coal Products	3
Services	6
Transportation Equipment	9
Other ⁴	8

⁴ This group includes industries with fewer than three observations: Mining, Leather Products, Fishery, Agriculture and Forestry, Rubber Products, Pulp and Paper, Glass and Ceramic Products, and Aluminum.

APPENDIX II

Distribution of the Delisting Events by Year, Country of Origin and Industry

Panel A. Year of Listing

<u>Year</u>	<u>Number of Observations</u>
1977	2
1982	2
1984	1
1991	2
1992	5
1993	9
1994	16
1995	14
1996	12
1997	8

Panel B. Country of Origin

<u>Country</u>	<u>Number of Observations</u>
United States	51
United Kingdom	5
Canada	10
Netherlands	3
Australia	2

Panel C. Industry of Affiliation

<u>Industry</u>	<u>Number of Observations</u>
Chemicals	9
Commerce	6
Communication	9
Electric Appliances	5
Electric Power & Gas	4
Finance & Insurance	9
Foods	4
Oil and Coal Products	3
Services	6
Transportation Equipment	8
Other ⁵	8

⁵ This group includes industries with fewer than three observations: Mining, Fishery, Agriculture and Forestry, Rubber Products, Pulp and Paper, Glass and Ceramic Products, and Aluminum.

APPENDIX III

Reasons Given for Listing on the Tokyo Stock Exchange

1. Kraft, listed October 30, 1987: "The company's decision reflects our recognition of Japan as a major global financial center, and our determination to increase our presence in the Japanese consumer marketplace," John M. Richman, Chairman; U.P.I., September 18, 1987.
2. Grumman, listed December 4, 1987: "Grumman's international business has grown considerably over the past decade. Much of this growth has been in the Pacific basin, and I believe Japan and her neighbors are our largest market potential. This listing will not only provide us with access to the Japanese financial markets but will demonstrate our commitment," John C. Bierwirth, Chairman; PR Newswire, July 16, 1987.
3. Scott Paper, listed July 15, 1988: "Scott's listing on the Tokyo Stock Exchange reflects our efforts to increase access to one of the world's key debt and equity markets, as well as our longstanding commitment to Japan and the Pacific region," Philip E. Lippincott, Chairman and CEO; PR Newswire, July 15, 1988.
4. American Express, listed November 14, 1985: "Our decision to list American Express Co. shares for trading on the Tokyo Stock Exchange reflects our confidence in the strength of the Japanese economy and the importance of the Japanese financial markets. We are optimistic that our action will result in broadening awareness of the company's businesses among retail and institutional investors in Japan," James D. Robinson III, Chairman and CEO, PR Newswire, July 15, 1985.
5. Chrysler, listed September 19, 1986: "The Tokyo Stock Exchange is the second largest in the world. The listing will provide us with better access to financial markets throughout Asia and help us to further diversify our shareholder base," Lee A. Iacocca, Chairman, Chicago Tribune, September 13, 1986.
6. Sears, Roebuck and Co., listed June 29, 1984: "The Japanese listing will give Sears the opportunity to acquaint Japanese investors with its past accomplishments and with its future plans," Edward R. Telling, Jiji Press Ticker, March 19, 1984.
7. Exxon, listed December 16, 1986: "No other foreign oil company is listed on the Tokyo exchange... We believe this will broaden the market for our shares and facilitate access to the rapidly expanding Japanese capital market, which is the second largest in the world," Platt's Oilgram News, September 5, 1986.

APPENDIX IV

Listing Requirements for Foreign Firms on the TSE

The company must be listed for at least two years in its country of origin on a stock exchange recognized by the TSE;

The minimum number of shares that must be listed are: (1) for a stock that will be traded in units of 1,000 shares, 20 million shares, (2) for a stock that will be traded in units of 100 shares, two million shares, (3) for a stock that will be traded in units of 50 shares, one million shares, (4) for a stock that will be traded in units of 10 shares, 200,000 shares, or (5) for a stock that will be traded in units of one share, 20,000 shares;

Applicant must have been incorporated and continuously in business for at least five years;

The applicant's stock must have sufficiently good liquidity in the applicant's home market;

The shareholders' equity as of the end of the business year before the listing application date must have been at least 10 billion Yen and profit of the corporation before tax in each of the last three years must have been at least 2 billion Yen;

An applicant must file documentation in Japanese including: Application for the listing of Securities; Stock Listing Agreement; Service Agreement and Paying Agreement.

Five hundred copies of the prospectus for listing must be made available to the public on demand at member securities companies.

APPENDIX V

List of Firms, Industry Affiliation and Delisting Dates

<u>Listing Firm</u>	<u>Industry Affiliation</u>	<u>Delisting Date</u>
Borden Inc.	Foods	September 14, 1977
GTE Corp.	Communication	December 21, 1977
Amax Inc.	Mining	May 27, 1982
Atlantic Richfield Company	Oil and Coal Products	November 19, 1982
Sperry Corp.	Transportation Equipment	May 18, 1984
*PepsiCo Inc.	Foods	December 5, 1986
*I U International Corp.	Leather Products	May 24, 1988
*Kraft Inc.	Foods	December 30, 1988
*RJR Nabisco Inc.	Foods	May 16, 1989
*Smithkline Beckman Corp.	Chemicals	August 15, 1989
*Squibb Corp.	Chemicals	October 21, 1989
*Pharmacia Aktiebolag	Chemicals	September 18, 1990
*Globe Investment Trust P.L.C.	Finance and Insurance	January 5, 1991
K Mart Corp.	Commerce	December 31, 1991
Lonrho P.L.C.	Commerce	December 31, 1991
*Security Pacific Corp.	Finance and Insurance	May 5, 1992
Avon Products Inc.	Chemicals	December 31, 1992
Philips Electronics N.V.	Electric Appliances	December 31, 1992
General Motors Corp.	Transportation Equipment	December 31, 1992
The News Corporation Ltd.	Communication	December 31, 1992
FPL Group Inc.	Electric Power and Gas	December 31, 1992
Royal Bank of Canada	Finance and Insurance	April 30, 1993
Georgia Pacific Corp.	Fishery, Agriculture and Forestry	June 30, 1993
First Chicago Corp.	Finance and Insurance	June 30, 1993
SCE Corp.	Electric Power & Gas	June 30, 1993
WMX Technologies Inc.	Services	June 30, 1993
The Limited Inc.	Commerce	July 30, 1993
Warner Lambert Co.	Chemicals	October 30, 1993
Dixons Group PLC	Commerce	October 30, 1993
Bellsouth Corp.	Communication	October 30, 1993
Robeco N.V.	Finance and Insurance	February 1, 1994
Nynex Corp.	Communication	February 1, 1994
Dial Corp.	Chemicals	March 31, 1994
Imperial Chemical Ind. P.L.C.	Chemicals	March 31, 1994
ITT Corp.	Services	March 31, 1994
American Brands Inc.	Foods	May 31, 1994
Potomac Electric Power Co.	Electric Power and Gas	May 31, 1994
Host Marriott Corp.	Services	May 31, 1994
*Grumman Corp.	Transportation Equipment	June 16, 1994
Eastman Kodak Co.	Chemicals	June 30, 1994
The Goodyear Tire & Rubber Co.	Rubber Products	June 30, 1994
The Chase Manhattan Corp.	Finance and Insurance	June 30, 1994
Bell Atlantic Corp.	Communication	June 30, 1994
Abbott Laboratories	Chemicals	November 1, 1994
F & C Investment Trust P.L.C.	Finance and Insurance	November 30, 1994
Scott Paper Co.	Pulp and Paper	December 31, 1994
British Gas P.L.C.	Electric Power and Gas	December 31, 1994
CIBC	Finance and Insurance	January 31, 1995
Standard Chartered P.L.C.	Finance and Insurance	January 31, 1995
Monsanto Co.	Chemicals	February 28, 1995
PPG Industries Inc.	Glass and Ceramics Products	February 28, 1995
Hewlett Packard Co.	Electric Appliances	March 31, 1995
U.S. West Inc.	Communication	March 31, 1995

*Borden Inc.	Foods	April 11, 1995
Saatchi & Saatchi Inc.	Services	June 13, 1995
General Electric Co.	Electric Appliances	June 30, 1995
Allied Signal Inc.	Transportation Equipment	June 30, 1995
Ford Motor Co.	Transportation Equipment	June 30, 1995
American Express	Foods	June 30, 1995
Rockwell International Corp.	Transportation Equipment	October 31, 1995
Knight Ridder Inc.	Communication	December 4, 1995
*Fisons P.L.C.	Chemicals	December 22, 1995
Pacific Dunlop Ltd.	Rubber Products	December 29, 1995
E.I. Du Pont de Nemours and Co.	Chemicals	February 7, 1996
Northern Telecom Ltd.	Electric Appliances	February 7, 1996
Walt Disney Productions	Services	February 13, 1996
Bankamerica Corp.	Finance and Insurance	March 4, 1996
Smithkline Beecham P.L.C.	Commerce	March 28, 1996
Sears Roebuck and Co.	Commerce	May 19, 1996
Transamerica Corp.	Finance and Insurance	June 29, 1996
BCE Inc.	Communication	June 29, 1996
The Dun & Bradstreet Corp.	Services	June 29, 1996
Weyerhaeuser Co.	Fishery, Agriculture and Forestry	August 30, 1996
The Boc Group P.L.C.	Chemicals	October 19, 1996
Exxon Corp.	Oil and Coal Products	December 27, 1996
Brunswick Corp.	Transportation Equipment	February 1, 1997
Schlumberger Ltd.	Oil and Coal Products	May 10, 1997
GKN P.L.C.	Transportation Equipment	June 7, 1997
AT & T Corp.	Communication	June 29, 1997
Texas Instruments Inc.	Electric Appliances	September 28, 1997
Alcan Aluminium Ltd.	Aluminum	December 13, 1997
Anheuser Busch Companies Inc.	Foods	December 30, 1997
Chrysler Corp.	Transportation Equipment	December 30, 1997

* Firm not included in final delisting sample