THE INFORMATION TRANSFER EFFECTS OF FOREIGN IPO ANNOUNCEMENTS

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Abstract - In the context of information content and information transfer, this study explores whether the foreign IPOs by the Taiwanese companies in China will lead to the abnormal returns of their industry rivals and affiliates in Taiwan. This study finds that when Taiwanese companies in China launch foreign IPOs, the move is perceived positively by the investors in the host country, and will have a positive effect on the stock prices. Specifically, the disclosure of foreign IPOs information by Taiwanese companies in China is significantly and adversely influence the stock prices of their home-market industry rivals, consistent with the competition hypotheses of foreign IPO announcements. On average, foreign IPO announcements of Taiwanese firms in China will negatively influence the abnormal returns of their affiliate in the home market.

Keywords - Foreign IPO, Information content, Information transfer, Cross listing.

I. INTRODUCTION

Previous researches show that there are three anomalies pertaining to a company's initial public offering: IPO under-pricing, hot issue market, and long-run underperformance after IPO. However, very few researches focus on the perspective of information transmission to address the issue of how IPO announcements affect shareholders' wealth and industry rivals' abnormal returns. This study reports evidence on cross-border information transfers associated with IPO announcements in an emerging market. In light of greater financial market integration, it is now significantly easier for firms to seek new sources of equity in the developed financial markets (Bell et al., 2008). This integration has led a growing number of multinational firms to pursue equity financing in global financial markets. However, will foreign IPOs affect the confidence of home-market investors on the prosperity of the issuing company, and consequently lead them to change their investment decisions? Do announcements of foreign IPOs contain information content? While some researches investigate foreign IPOs in developed financial market, relatively few has focused on foreign IPOs in emerging markets. In particular, the wealth effect of foreign IPO announcements on home-market affiliated companies and industry rivals is yet to be explored.

This study finds that the disclosure of foreign IPOs information by Taiwanese companies in China is significantly and positively correlated with the abnormal returns of their industry rivals in the host country. However, it will significantly and adversely influence the stock prices of their home-market industry rivals, consistent with the competition hypotheses of foreign IPO announcements. On average, foreign IPO announcements of Taiwanese businesses in China will negatively influence the abnormal returns of their affiliate in the home market.

The remainder of the paper is organized as follows. Section 2 presents the literature survey and the research hypotheses. Section 3 introduces a research design. Section 4 explains the empirical results. Section 5 provides concluding remarks.

II. LITERATURE SURVEY AND RESEARCH HYPOTHESIS

What are the factors that affect the choice of IPO market? Pagano et al. (2002) and Sarkissian and Schill (2004) find that enterprises tend to conduct IPOs in large capital markets with high liquidity and tax benefits. Many emerging markets set up trading barriers for foreign securities and separate domestic equity and foreign equity in different exchanges, resulting in a phenomenon known as market segmentation in academia. Chui and Kwok (1998) suggest that compared to the investors in China's domestic market, B-share investors are able to obtain more precise information more quickly. Therefore, the price fluctuation of a B share becomes an important index for those who invest in the A share of the same company. Companies listed on both markets usually experience higher share prices in the A-share market than B-share market (Ma, 1996). Pagano et al. (2002) point out that when there is a clear market segmentation separating the domestic and foreign equities, enterprises issuing equity in an overseas market are likely to enjoy price premium.

Will the disclosure of foreign IPO information affect the confidence of investors on the prosperity of the IPO firms, and consequently change their investment decisions and behaviors? Howe and Kelm (1987) explore the influence of foreign IPOs of US firms on the wealth of the shareholders, and suggest that going public in a foreign market does not increase the wealth of shareholders. Lau et al. (1994) indicate that when American companies conduct IPOs in overseas capital markets, they do not significantly change the wealth of the shareholders. On the other hand, Miller

(1999) examines US companies that issue GDR for the first time and studies how the announcement of GDR issuance affects the stock prices/values of companies in the issuers' domestic markets and the GDR issuing markets. Miller (1999) finds that the announcement of issuing GDR contains information content. That is, it will create positive effect on the shareholders' wealth.

Information transmissions occur when an announcement made by one firm contemporaneously provides information about the performance and value of one or more non-announcing firms (Schipper, 1990). For a firm, the occurrence of major events or the disclosure of operational information not only affects its stock price but also the rivals' share performance. Researchers refer to the positive association between the abnormal share price returns of the announcer and its competitors as the "contagion effect" and the negative relationship as the "competitive effect". Szewczyk (1992) explores whether announcements of public offerings of common stock elicit abnormal stock price reactions among firms in the same industry. He finds that average abnormal returns are significantly negative for announcing and non-announcing firms. This suggests that investors draw inference about the general prospects of the industry as a whole rather than shifts in competitive advantage between the announcing firms and its industry rivals. Lang and Stulz (1992) find that with announcements of bankruptcy, the contagion effect generally dominates the competitive effect. That is to say, share prices of competitors react in the same direction as that of the announcing firm. Zantout and Tsetsekos (1994) indicate that a firm's voluntary announcement of increasing R&D investment adversely affects the abnormal share returns of the rivals, signaling a competitive effect. Erwin and Miller (1998) suggest that a firm's announcement of a treasury stock repurchase results in a competitive effect, while Akhigbe and Martin (2000) point out that a firm's announcement of overseas M&A plan leads to a positive spill-over effect on the abnormal return on its competitors' share prices. In addition, researchers find that the competitive effect dominates in both cases over announcements of new products launches (Chen et al., 2005) and the disclosure of capital expenditure by US corporations (Chen et al., 2007).

To the extent that domestic financial-related information transmissions are well established in the literature, these similarities provide some comfort about the reliability of cross-border analysis. Firth (1996) finds that there exists observable earnings information transmissions between Britain and the United States and the magnitude of transmissions is greatest from the United States to Britain. Alves et al. (2009) find that negative earnings surprises affect investors' perceptions of comparable foreign non-announcing firms. Profit warnings announced by firms are interpreted as bad news for the average comparable foreign non-announcer, suggesting that contagion effects dominate in the cross-section.

With more firms transacting a larger fraction of their business across national boundaries, the relevance of financial information released by firms in one country for their foreign peers is likely to be on the rise. Previous studies confirm that a firm's announcements of major events have a significant effect on the competitors' share prices, but the consensus as to the direction of the influence has yet to be reached. This study infers that a firm's foreign IPO announcement poses significant influence on the abnormal return of home-market rivals' stock prices. We therefore formulate the hypothesis on the information transfer of foreign IPO announcements.

H1a: The announcements of foreign IPOs by Taiwanese firms in China will result in a contagion effect; the abnormal return from the announcements of foreign IPOs has a significantly positive correlation with the abnormal return of the issuers' industry rivals in the home country.

H1b: The announcements of foreign IPOs by Taiwanese firms in China will result in a competitive effect; the abnormal return from the announcements of foreign IPOs has a significantly negative correlation with the abnormal return of the issuers' industry rivals in the home country.

III. RESEARCH DESIGN

3.1 Research period

This research covered the period from 1999 to 2008 and examined the Taiwanese companies in China that disclosed their IPO plans in Hong Kong in the said period. Information of the sample firms' accounting, financial, and stock prices was gathered from Taiwan Economic Journal (TEJ). Firms with incomplete data were also excluded from our empirical analysis. We hence collected 50 announcements of foreign IPO. When analyzing the effect of a company's foreign IPO announcement on rivals' stock prices, a proper categorization of the sample firms will significantly enhance the accuracy of the research. Therefore, we categorize the sample firms based on 3-digit Standard Industrial Classification (SIC) Code.

3.2 Methodology and empirical models

In this study, we use event study proposed by Fama et al. (1969) to test whether the announcement of foreign IPO (IPO in Hong Kong) by Taiwanese corporations in China will result in the abnormal returns on stock prices. We briefly describe the key features of the event study methodology and how to estimate the abnormal returns (see Brown and Warner, 1985, for details). Various models have been proposed to estimate abnormal returns. We adopt the market model to estimate the daily stock returns of foreign IPO announcements because the model is the

best specified model and controls for the systematic risk of stock.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

where t is the serial number of trading day, $t \in \{0, k, k+1, \ldots 180\}$. $t \in \{0, \ldots, k\}$ is event period, $t = 0$ is the announcement day of foreign IPO (issue date), and $t \in \{k+1, \ldots 180\}$ is estimation period. R_{it} is the rate of return on the stock price of firm i on day t. R_{mt} is the rate of return on a market portfolio of stocks on day t. β_i is the systematic risk of stock i. ε_{it} is error term. We use t statistic obtained from standardized residual method to make statistical inference. The significance of the mean (cumulative) abnormal return allows us to infer that the event (foreign IPO announcement) has an essential impact on the value of the firms.

We refer some related researches, for example Lang and Stulz (1992), Erwin and Miller (1998), Akhigbe and Martin (2000), and Chen et al. (2007), to build the empirical model to examine the information transfer effect of foreign IPO announcements.

IV. EMPIRICAL ANALYSIS

4.1 Descriptive statistics

Table 1 shows the descriptive statistics in the regression analysis for the announcement of foreign IPOs by Taiwanese companies and its effect on the abnormal returns of their home-market industry rivals. The average CARs of Taiwanese companies in China that announce foreign IPOs (e.g.,) are positive in all the event periods during the research periods. This indicates that investors in the host country perceive the announcements of IPOs as a signal of promising future profitability. On the other hand, the average CARs of the issuers' home-market rivals (e.g.,) are also positive but come in smaller than those of the IPO firms during all the event periods. Furthermore, the average of the growth opportunities of Taiwanese firms in China that announce foreign IPOs comes in at 8.0733, while that of their industry rivals in the home country stands at 1.5826. In addition, the average relative size of these competitors is 0.9991, slightly smaller than firms that go public in an overseas market.

Table 1 Descriptive statistics

Variable	Mean	Std. Dev.	Max.	Min.
Ccar (0,1)	-0.0226	1.65	20.32	-9.89
Ccar (0,2)	0.0248	1.92	19.31	-9.66
Ccar (0,5)	0.1834	2.61	18.32	-10.05
Ccar(0,30)	1.2537	6.53	24.64	-21.94
Acar (0,1)	1.211	6.49	28.81	-5.73
Acar (0,2)	1.007	6.06	26.17	-7.93
Acar (0,5)	0.8094	5.9	24.94	-5.1
Acar(0,30)	1.475	8.66	28.11	-11

Note: $Ccar_{j,I}(0,k)$ represent the average cumulative abnormal returns of home-market rival i in foreign listing announcement event window (0 , k) (unit: %). $Acar_{j,I}(0,k)$ is the average cumulative abnormal returns of foreign listing announcing firm j in the event window (0 , k) (unit: %).

4.2 Analysis on the information content of foreign IPO announcements by Taiwanese firms in China

Table 2 shows the average CARs of Taiwanese IPO firms and their affiliates. According to Panel A, the average abnormal return rate (hereafter referred to as AR) of all issuers on the date of announcement (event day t=0) during event period (0, 2) stands at 2.1383%, reaching a significance level of 1%. The cumulative abnormal return rate (hereafter referred to as CAR) of the whole sample on the day of foreign IPO announcement, and the following one and two days are 2.1383%, 2.1856%, and 2.0438%, respectively, all reaching a significance level of 1%. Panel B indicates that the CARs of all issuers during various event periods are significantly positive.

In order to gain a preliminary understanding to the effect of foreign IPO announcements by Taiwanese firms in China on the CARs of their affiliates in the home market, this study calculates the CARs of the affiliated companies during different event periods. Table 2 shows that the CARs of the affiliates in all the event periods are significantly negative.

The announcements of foreign IPOs by Taiwanese firms in China will inversely affect the CARs of their affiliates in the home country. This suggests that investors believe foreign IPOs by the Taiwanese firms in China will affect the fund raising ability and profitability of their affiliates in the home country.

4.3 Analysis on the information transfer of foreign IPO announcement by Taiwanese businesses in China

Table 3 shows how announcements of foreign IPOs by Taiwanese firms in China affect the abnormal returns of their home-market industry rivals. According to Table 3, the CARs of IPO companies and their competitors are significantly and negatively correlated in all IPO event periods. In the regression model of event period (0,1), (0,2), (0,10), and (0,30), the regression coefficients ( ) of the information transfer of foreign IPO announcements are -0.0191 (achieving a 1% significance level), -0.0086, -0.0345 (reaching a 5% significance level), and 0.056 (reaching a 1% significance level). We find that the announcements of foreign IPOs by Taiwanese fimrs in China will result in a significant information transfer effect; the CARs of IPO firms and their industry rivals at home have a significantly negative correlation, confirming the competition effect of foreign IPOs. Therefore, Hypothesis 1B is supported.

The CARs of IPO companies are negatively correlated to those of the affiliates in the home

market during various event periods. In the regression model of event period (0,1), (0,2), (0,10), and (0,30), the regression coefficients ( ) of the information transfer of foreign IPO announcements are -0.0736 (achieving a 10% significance level), -0.1083 (achieving a 10% significance level) , -0.0709, and 0.1693 (not reported in the Tables). We find that foreign IPO announcements of Taiwanese firms in China will result in a significant information transfer effect; the CARs of the IPO companies and their affiliate in the home market are significantly and negatively correlated.

This paper also analyzes how the foreign IPO announcements affect the CARs of their competitors in the host market. In various event periods, the CARs of IPO companies have a significantly positive relationship with those of the competitors in the host market. In summary, we find that the foreign IPO announcements of Taiwanese firms in China will have a significant information transfer effect on the competitors in the host country; and the CARs of IPO companies and the competitors in the host country are significantly and positively correlated, supporting the contagion effect of foreign IPOs.

CONCLUSION

This paper explored Taiwanese firms in China and whether their decisions to conduct foreign IPO will result in the intra-industry effect. The use of Taiwan data in this paper provides important international evidence and adds to our understanding of issues relevant in different business environments. Capital markets in regions on the Pacific Rim have attracted increasing attention from both practitioners and researchers. China and Taiwan (so-called Greater China) are representative of two of the fastest-growing economies in this region. They attract substantial investments from US, UK, Japan, and other multinational firms. Therefore, this study makes valuable contributions to the literature by providing insights into the stockholder wealth and intra-industry effects of foreign IPO announcements by firms in emerging market. This paper finds that the disclosure of foreign IPOs information by Taiwanese companies in China is significantly and positively correlated with the abnormal returns of their industry rivals in the host country. However, it will significantly and adversely influence the stock prices of their home-market industry rivals, consistent with the competition hypotheses of foreign IPO announcements. On average, foreign IPO announcements of Taiwanese businesses in China will negatively influence the abnormal returns of their affiliate in the home market.

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Table 2 The ARs and CARs of foreign IPO announcing firms and their home-market affiliated firms

Panel A: The AR and CAR of announcers and affiliates in event window (-2, 2) unit: %

Date	Announcers N=50		Affiliates N=77	
	AR (*t* value)	CAR (*t* value)	AR (*t* value)	CAR (*t* value)
-2	-	-	-0.2156*	-0.2156*
			(-1.892)	(-1.892)
-1	-	-	0.0991	-0.1165
			(0.87)	(-0.723)
0	2.1383***	2.1383***	-0.1945*	-0.2816
	(15.033)	(15.033)	(-1.707)	(-1.55)
1	0.0474	2.1856***	-0.2909**	-0.5725**
	(0.333)	(10.866)	(-2.553)	(-2.586)
2	-0.1419	2.0438***	-0.1125	-0.6752***
	(-0.997)	(8.296)	(-0.987)	(-2.748)

Panel B: The CAR of announcing firms and affiliates in all event window

Window	Announcers	Affiliates
	CAR (*t* value)	CAR (*t* value)
(0, 2) / (-2, 2)	2.0438***	-0.6752***
	(8.296)	(-2.748)
(0, 5) / (-5, 5)	2.0621***	-0.7023*
	(5.918)	(-1.834)
(0, 10) / (-10, 10)	2.4364***	-1.0017*
	(5.163)	(-1.918)

Note: Numbers in parentheses are *t*-value. Asterisks indicate significance at the level of 1% (***), 5% (**), or 10% (*) in a two-tail test. N is the sample size. 2. In Panel A, the ARs on Date 0 is mean abnormal returns of announcers and affiliates on announcement day of foreign IPO. The ARs on Date 1 implies the mean abnormal returns of announcers and affiliates on the trading day after the announcement day. When event window are 3 days ($t \subset (0,2)$), the CAR of Date 2 is the sum of all ARs on the announcement day, the following day, and the day after. This rule also applies to panel B.

Table 3 Effect of foreign IPO announcement on the abnormal returns of home-market rival firms

Model: $Ccar_{i,t}(0,k) = \alpha_0 + \beta_1 Acar_{j,t}(0,k) + \beta_2 Apb_{j,t} + \beta_3 Alev_{j,t} + \beta_4 Ani_{j,t} + \beta_5 F_{j,t} + \beta_6 Cs_{i,t} + \beta_7 Cpb_{i,t} + \beta_8 Clev_{i,t} + \beta_9 Crdi_{i,t} + \beta_{10} Cni_{i,t} + \beta_{11} Cfc_{i,t} + \varepsilon_{i,t}$

Ind. Var. \ Den. Var.	Exp. Signs	$Ccar_{i,t}(0,1)$	$Ccar_{i,t}(0,2)$	$Ccar_{i,t}(0,10)$	$Ccar_{i,t}(0,30)$
Intercept		0.0798	0.3093	4.2387***	11.1632***
		(0.223)	(0.702)	(5.621)	(8.101)
$Acar_{j,t}$	?	-0.0191***	-0.0086	-0.0345**	0.056***
		(-2.792)	(-0.007)	(-2.113)	(3.195)
$Apb_{j,t}$	+	0.0046*	0.0049	0.0367***	0.0385***
		(1.677)	(1.347)	(5.043)	(2.681)
$Alev_{j,t}$	-	-0.0088***	-0.0071***	-0.0178***	-0.0115
		(-4.124)	(-2.898)	(-4.121)	(-1.5)
$Ani_{j,t}$	-	6.61E-05**	8.16E-05**	-8.71E-05	-7.08E-05
		(2.391)	(2.539)	(-1.64)	(-0.794)
$F_{j,t}$	?	0.6706***	0.3474**	0.1531	-0.854
		(4.57)	(2.045)	(0.486)	(-1.621)
$Cs_{i,t}$	+	0.0668	-0.0587	-3.6912***	-10.0531***
		(0.212)	(-0.152)	(-5.433)	(-7.819)
$Cpb_{i,t}$	+	0.0597**	0.0835**	0.1741**	0.1048
		(2.294)	(2.518)	(2.349)	(1.073)
$Clev_{i,t}$	-	-0.0006	-0.004	0.0024	0.0118
		(-0.239)	(-1.357)	(0.437)	(1.238)
$Crdi_{i,t}$	+	1.3554**	1.0989	-1.5966	-9.1859***
		(2.541)	(1.435)	(-0.864)	(-3.677)
$Cni_{i,t}$	+	0.0023**	0.0005	0.0023	0.0073*
		(2.178)	(0.406)	(0.867)	(1.949)
$Cfc_{i,t}$	?	-0.0034	-0.0015	-0.0003	0.0503**
		(-0.677)	(-0.277)	(-0.03)	(2.553)
Adjusted R^2		2.88%	1.23%	2.87%	4.49%
F Statistic		6.81***	3.446***	6.793***	10.2159***

Note: Numbers in parentheses are *t*-values based on the revision of White (1980). Asterisks indicate significance at the levels of 1% (***), 5% (***), or 10% (*) in a two-tail test. The numbers of observations are 1,073. The results of six days event window ($t \in (0,5)$) are similar to those of three days window. We use VIF values to measure multicollinearity among independent variables. All VIF values of independence variables are below 10, which show that the models used do not have strong multicollinearity.

