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The Determinants of Foreign Investments in Korean Stock Market[1]

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Abstract

Purpose – Along with the rise of foreign investments in the Korean stock market, there has been a variety of studies on their influence. The conflicting findings on the question of information asymmetry of foreign investors among existing literatures appear to be a result of mixture of research method problems, what information is defined as being comparable, individual business levels, or the entire stock market. This paper empirically investigates what factors contribute to foreign investments in firms in the Korean stock market.
Research design, data, and Methodology – Samples are constructed by manufacturing firms listed on the stock market of Korea as well as those who settle accounts in December from 2001 to 2018. Financial institutions are excluded from the sample as their accounting procedures, governance and regulations differ. This study adopted the panel regression model to assess the sample construction including yearly and cross-sectional data.
Result – This paper find that firms' R&D, dividends, size give significant positive impact to foreign investment, whereas debt gives significant negative impact to foreign investment. This relationship does not change when the samples are divided before and after the 2008 global financial crisis.
Conclusion – This results support the literatures that foreign investors favor firms lowering their information asymmetry.

Keywords: Foreign Investor, Financial Crisis, Information Asymmetry, Panel Regression.

1. Introduction

Since the 1997 Asian crisis, restrictions on the foreign investment in the Korean stock market have been lifted, excluding some stocks. The increase in the stock market of foreign investors is in line with the trend that the percentage of foreign investors have gradually grown in the host countries' stock markets of developing countries as a result of globalization since 1990s. Among them, studies have continued on what factors caused foreign investments. Because foreign investors are not familiar with the status of host countries' local businesses, there is an information asymmetry problem for their host countries' counterparts. Studies were examined whether foreign investors earned excess return on the stock market (Kang and Stulz, 1997; Kim and Cheon, 2004; Choe et al., 2005; Dvorak, 2005; Park, 2014). And those studies showed conflicting findings on the question of information asymmetry of foreign investors. Foreign investors try to solve these information asymmetry problems by selecting

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companies with good performance and low risk and low debt ratio (Kang and Stulz, 1997; Jeong and Park, 2005).

This paper empirically investigates what factors contribute to foreign investment in firms in the Korean stock market. Using sample firms through the fiscal period from 2001 to 2018 by applying a panel model, we can contribute what factors impact foreign investment in the Korean Stock Market.

2. Literature Review

In this study, we want to understand what factors lead to foreign investments. Because foreign investors are not familiar with the status of host countries' local businesses, there is an information asymmetry problem for their host countries' counterparts. Kang and Stulz (1997), Kim and Cheon (2004), Choe et al. (2005), Dvorak (2005), and Park (2014) examined whether foreign investors earned excess return on the stock market. In the study, Kim and Cheon (2004), and Dvorak (2005) showed foreign investors' significant excess returns over domestic investors because they were more aware of the companies than domestic investors because they had an advantage in the information at the industrial level and across the macroeconomic level, or foreign investors' investment strategies superior than domestic investors. Whereas Kang and Stulz (1997) studied the Japanese market and found that foreign investors did not differ in their returns than domestic investors. In Choe et al. (2005) and Park (2014), foreign investors also failed to find themselves superior to domestic investors. The conflicting findings on the question of information asymmetry of foreign investors appear to be a result of mixture of research method problems, what information is defined as being comparable, individual business levels, or the entire stock market.

Contrasting to Kim and Cheon (2004) and Dvorak (2005), Kang and Stulz (1997) showed foreign investors have information asymmetry. They studied stock ownership in Japanese firms from 1975 to 1991 by non-Japanese investors. They predicted that foreign investors hold national level market portfolios or portfolios tilted to stocks with high expected returns and empirical results showed that existing models are inconsistent with their evidence. They documented that foreign investors hold more shares of firms disproportionately in large firms and in manufacturing industries and firms with good accounting performance, low leverage, and low unsystematic risk. There is indication that small firms with high export ratio, firms with greater share turnover, and firms having ADRs have greater foreign ownership when they control the size.

Kim and Cheon (2004) empirically look into foreign or domestic investors and which part is better informed investors in the Korean stock market. They examined ex post returns subsequent to earnings surprise. As for one information variable, they adopted earnings surprise which could be calculated as the difference between analysts' earnings estimates and the actual earnings announcement notified on the date of an annual shareholder meeting of a firm. Domestic retail investors tended to take a net purchase position before the announcement date, but tended to take a net selling position around the date. Accordingly, they seemed to have an information advantage for a positive earnings surprise. They cannot find any evidence that foreign investors' net purchases were grounded upon information advantage considering earnings surprise. But foreign investors might have better trading strategy or have other information advantage.

Using transaction data from Indonesia, Dvorak(2005) showed that domestic investors have higher earnings than foreign investors. Besides, customers of global brokerages have higher long term and smaller medium and short term profits than customers of local brokerages. Their results suggested that customers of local brokerages have a short lived information advantage, but that customers of global brokerages are better at selecting long term winners. Finally, domestic clients of global brokerages have higher earnings than foreign clients of global brokerages, suggesting that the mixture of local information and global competence leads to higher profits.

Choe et al. (2005) investigated whether domestic investors have a point over foreign investors in trading domestic stocks or not. Using data from Korean stock market, they show that foreign money managers paid more than domestic money managers when foreign investors bought and received less when foreign investors sell for medium and large trades. They found that daily sample average trade-weighted detriment of foreign money managers is 21 basis points for buying and 16 basis points for selling. There also exits some evidence that domestic individual investors have an edge over foreign investors. The explanation for these results is that prices move more against foreign investors than against domestic investors before trading.

Park (2014) studied determinants of the foreign investment from the institutional theory perspective. The 'asymmetry of information', or 'decisions based on limited information', was applied as the basic assumption to mitigating the assumption of rational choice by investors in foreign investments and as a theoretical background, the 'institutional theory perspective was applied.

Foreign investors find it difficult to understand the situation of companies in host countries' firms, causing information asymmetry problems. Foreign investors try to solve these information asymmetry problems by selecting companies with good performance and low risk and low debt ratio (Kang and Stulz, 1997). Jeong and Park (2005) studied what caused foreign investors' investments in Korean stock market. Empirical results of multiple regression analysis from 1988 to 2002 financial data of the corporations listed in the Korean stock market showed that debt ratios to asset, profitability, trading volume and share holdings of companies affected foreign investors' behavior and other factors are not statistically significant. Their major findings are that foreign investors tended to invest higher profit companies and avoid investing companies which have higher trading volume and debt ratios. R&D investments face information asymmetry problems. R&D investment in a company's management decisions is relatively long compared to real investment and it is difficult to grasp the relative performance of the R&D investment. Especially for outside investors, it is not easy to grasp the performance of corporate R&D investments.

3. Sample and Methodology

In constructing our sample, we selected manufacturing firms listed on the stock market of Korea as well as those who settle accounts in December. Financial institutions are excluded from the sample as their accounting procedures, governance and regulations differ. Our sample period covers the 2001~2018 period. This study adopted the panel regression model to assess the sample construction, including yearly and cross-sectional data.

[Table 1] shows the summary statistics of the independent variables, and indicates that the minimum values of the variables. This fact suggests that dividend variables have the characteristic of censored distribution. The average of ROE is 3.5%, while that of Major shareholders(M) is 41.585%. The Dividends averaged at 0.8%, R&D(RND) at 5.7%, debt ratio(DEBT) at 120.3%, Standard deviation of (STD) 0.115 and log of total assets(SIZE) at 26.302. The correlation of independent variables is relatively small. So variance inflation factor and tolerance were verified for possible multi-collinearity, but it proved to have few special problems. The correlation between ROE and M, ROE and DIV, ROE and Size shows positive significant at 5% level and ROE and RND, ROE and DEBT shows negative significant at 5% level. From this relationship, we can expect that if firms spend money like RND, ROE will become weak and if firms earn and distribute money, ROE will become strong. All independent variables were used from previous years(t-1) and depend variables were used at time t.

Table 1: Summary Statistics

Variables	Mean	Correlation						
		ROE	M	DIV	RND	DEBT	STD	SIZE
ROE	0.035	1						
M	41.585	0.1348*	1					
DIV	0.008	0.2993*	0.1447*	1				
RND	0.057	-0.1364*	-0.1461*	-0.0909*	1			
DEBT	1.203	-0.3398*	-0.0557*	-0.2634*	0.0239*	1		
STD	0.115	-0.0961*	-0.1216*	-0.0898*	0.3137*	0.0461*	1	

SIZE	26.302	0.0577*	-0.0424*	0.0281*	0.0370*	0.0196	-0.0606*	1

Note1 : ROE = (net income / shareholders' equity); M = the ownership ratio of majority shareholders and affiliated parties; DIV = (cash dividends / net income); RND = research and development (R&D) expenditures / sales; DEBT = (total liabilities / total stockholders' equity); STD = standard deviation of the operating income for the past three years; SIZE = log (total asset)
Note2 : * indicates the significance level at 5%

4. Empirical Results

[Table 2] shows the results of the panel regression analysis, which was conducted to find what factors contribute to foreign investment in firms in the Korean stock market.
Model (1) shows the relationship between financial variables and foreign investments from 2000 to 2018. Because 2008 global financial crisis hit the world, we checked whether there any difference before and after the global financial crisis. So Model (2) shows the relationship before 2008 (from 2000 to 2007) and Model (3) shows the relationship after 2008 (from 2009 to 2018).

Table 2: Regression Results

Dependent variable	(1)	(2)	(3)
	FT		
ROE	-0.086	-0.321	-0.159
	(-0.512)	(-0.847)	(-0.971)
M	-0.011	0.028*	-0.002
	(-1.171)	(1.796)	(-0.133)
DIV	140.086***	98.758***	115.305***
	(11.798)	(3.751)	(8.746)
RND	3.694**	12.851	1.345
	(2.342)	(1.568)	(0.700)
DEBT	-0.558***	-0.484**	-0.752***
	(-4.848)	(-1.994)	(-5.594)
STD	-0.251	2.228	-2.493
	(-0.245)	(0.648)	(-1.628)
SIZE	2.169***	5.075***	3.427***
	(11.711)	(12.023)	(14.124)
Constant	-48.117***	-123.909***	-81.751***
	(-9.758)	(-11.283)	(-12.512)
Observations	5,309	1,299	3,696

Note: The value in parentheses is z-value, and ***, **, * means significant at 1%, 5%, and 10% levels, respectively

Throughout the model from (1) to (3), dividends and size showed significant positive influence on foreign investments, and debt showed significant negative influence on foreign investments. R&D showed significant on model (1), but showed insignificance on model (2) and (3). These results showed the same results with Kang and Stulz (1997) and Jeong and Park (2005) in that foreign investors' investments were intrigued by lowering information asymmetry problems by selecting companies with good performance and low risk, low debt ratio and high profitability.

5. Discussions

This paper empirically investigates what factors contribute to foreign investment in firms in the Korean stock market. We used Korean manufacturing firms listed on the stock market through the fiscal period from 2000 through 2018. In this paper, we documented evidence that foreign investors' investments were intrigued by lowering information asymmetry problems by selecting companies with good performance and low risk, low debt ratio and high profitability.

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