

A Study on the Impact of Foreign Investors on Earnings Management: Using Investment Horizons of Foreign Investors

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Abstract

We investigate the role that foreign investors play in restraining earnings management activities of firms. For this study, we use two variables, equity ratio and investment horizons of foreign investors, as the proxies of foreign investors. Especially, we focus on investment horizons of foreign investors as the proxy of impact of foreign investors on earnings management. The investment horizons of foreign investors is measured as the investor turnover is suggested by Gaspar et al. (2005). And earnings management is measured by the modified Jones model (Dechow et al. (1995)).

We find that corporate earnings management is less prevalent when Long-term foreign investors are among shareholders. Our study shows that if investment horizons of foreign investors is short, equity ratio of foreign investors would be not influence to facilitate mitigation of managers' use of earnings management. Especially, if investment horizons of foreign investors is short and equity ratio of foreign investors is high, it could be facilitate acceleration of managers' use of earnings management. This means that it can be more important to consider for investment horizons of foreign investors than equity ratio of foreign investors on testing the impact of foreign investors on the earnings management by this paper. And the investment horizons of foreign investors can be better proxy of foreign investors than equity ratio of foreign investors.

Keywords: Investment Horizons of Foreign Investors, Monitoring, Earnings Management.
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I . Introduction

This paper is an empirical analysis of the impact of investment horizons of foreign investors on the earnings management.

A large body of evidence suggests that institutional investors are sophisticated shareholders who can discipline managers through monitoring their activities and intervening when necessary (e.g. Shleifer and Vishny (1986), Hartzell and Starks (2003), Li, Moshirian, Pham, Zein (2006)), and that such investors influence firms' financial reporting policies (e.g., Ramalingegowda and Yu (2012), Fang, Maffett, and Zhang (2013)). However, there is limited evidence on the role that institutional investors play in influencing firms' accounting policies (Ugur Lel (2013)). Such a distinction in institutional ownership is important, because institutional investors are often associated with their the expense in monitoring the firm.

In Korea market, we can regard foreign investors as institutional investors if they are located in countries outside the home country of the firm and domestic otherwise, independent if they are mutual funds or investment advisers, and grey otherwise. Actually foreign investors are mostly institutional investors in Korea. So we focus on the impact of foreign investors as institutional investors in Korea on the earnings management practices in this paper.

Ugur Lel (2013) suggested two competing arguments about the potential impact of foreign institutional investors on firms' earnings management activities.

On one hand, foreign investors from countries with stronger governance provisions can be better monitors of the management worldwide because they are less likely to have long-term business relations with local firms (e.g., see Gillan and Starks (2003)). Such foreign investors may also have a greater ability to monitor the management through their expertise and experience in various ways to mitigate agency conflicts, such as through management intervention (e.g., Becht, Franks, Mayer, and Rossi (2009)), and "exporting" good governance practices across countries. Further, they may be less tolerant than Domestic Investors to the incumbent management's aggressive use of earnings management practices to conceal bad news and protect their private control benefits (e.g., Giannetti and Laeven (2009)), as foreign investors have both home and host country regulations to comply with and a greater reputation at stake (Ugur Lel (2013)). These arguments suggest that foreign investors are more involved in monitoring the firm's management, and thus reduce earnings management activities to a greater extent than other investors when investment horizons of foreign investors is long.

On the other hand, foreign investors may have significant information disadvantages with respect to local firms and as a result incur higher monitoring costs. For example, several studies find evidence within the United States that institutional investors located closer to firms are associated with a lower degree of corporate financial reporting discretion and earnings management (e.g.,

Chhaochharia, Niessen-Ruenzi, and Kumar (2012)). This alternative view implies that foreign investors are associated with more prevalent earnings management practices at firms. Further, there can be a tendency of foreign investors to invest in firms with better financial reporting practices (e.g., Leuz et al. (2010), Ammer, Holland, Smith, and Warnock (2012)), which implies a reverse causality between foreign investors and the degree of earnings management (Ugur Lel (2013)).

But, these monitoring costs can be different in monitoring term. Generally, the longer monitoring term is, the lower the term-to-monitoring costs is. So if investment horizons are long-term, the costs-to-effectiveness will increase in monitoring. Therefore if foreign investors are long-term investors, they can concentrate on monitoring of the management without regard to monitoring cost than short-term investors. Consequently, we can expect that the longer investment horizons of foreign investors (are institutional investors have better monitors of the management) is, the higher their monitoring effectiveness is. And we can also expect that the higher their monitoring effectiveness is, the lower earnings management practice is. Therefore we can also expect that the longer investment horizons of foreign investors (are institutional investors have better monitors of the management) is, the lower earnings management practice is. Based on this theoretical background, we will exam the impact of foreign investors on corporate

earnings management activities in the light of their investment horizons in this paper.

Given the rising influence of foreign investors in Korea markets and their active involvement in monitoring the firms' management, we address their role in corporate reporting policies by examining the impact of foreign investors on corporate earnings management activities the light of their investment horizons. Following the studies that underscore the importance of taking into account the heterogeneity among institutional investors in determining their ability and willingness to effectively monitor the managers of firms, we use two variables to proxy for the degree of monitoring of managers (Ugur Lel (2013)); Equity ratio of foreign investors and investment horizons of foreign investors.

And in our analysis, we also use the independence of foreign investors from the management of firms as another measure of monitoring effectiveness by such shareholders. Independent foreign investors are viewed as effective monitors of managers because of a greater likelihood of collecting information and a lack of long-term business relations with local firms (e.g., Almazan, Hartzell, and Starks (2005), Chen et al. (2007)). As a result, foreign investors may have a greater impact on earnings management practices when they are independent. Ultimately, the impact of foreign investors on earnings management activities is an empirical question, which we attempt to show in this paper.

Investment horizons, as many other

shareholder characteristics, are naturally hard to observe. The availability of data on foreign investors provides a unique opportunity to infer investment horizon from actual portfolio behavior. Foreign investors constitute the biggest investor group in the Korea equity markets and are usually portrayed as a pivotal investor group in takeovers (Useem (1996)). They are also investors whose portfolio policies are important, well defined, and professionally set up. Previous research has investigated the role played in acquisitions by different classes of shareholders but has not addressed investment horizon.

To test our prediction that is the longer investment horizons of foreign investors (are institutional investors have better monitors of the management), the lower earnings management practice, we build a measure of investor horizon based on the average turnover of foreign investors' entire portfolios like a Gaspar et al. (2005). Short-term investors are defined as those exhibiting high portfolio turnover. On the contrary, long-term investors are defined as those exhibiting low portfolio turnover. Our paper analyzes ultimately the impact of investor horizons of foreign investor on the earnings management.

To test our prediction, we use a discretionary accruals, as proxy for earnings management. We estimate discretionary accruals by using the cross-sectional version of the modified Jones model (Dechow et al. (1995)). Using a sample of 1,748 firm-years during the period of 2008 and 2011, our findings clearly demonstrate that the

investment horizons of foreign investor affect the relative the level of earnings management in firms. According to this result, it is important to consider investment horizons of foreign investor when we analyze the impact of foreign investor on the earnings management.

The main contribution of this paper is summarized as follows. This paper is the initial paper that consider investment horizons of foreign investor as proxies for influence of foreign investor on the earnings management. Prior paper, such as Kim and Yoon (2009), Lee et al. (2012) and so on used equity ratio of foreign investors as proxy for impact of foreign investor.

The remainder of this paper is organized as follows. The section II develops the research design including hypothesis development and research methodology. The section III analyzes the impact of investor horizon of foreign investor on the earnings management. And a brief conclusion follows.

II. RESEARCH DESIGN

2.1 Hypothesis Development

Institutional investors are sophisticated shareholders who can discipline managers through monitoring their activities and intervening when necessary and that such investors influence firms' financial reporting policies. In Korea market, foreign investors are mostly institutional investors because they are located in countries outside the home country of the firm and domestic otherwise, independent if they are mutual

funds or investment advisers, and grey otherwise. And it is generally said that foreign capital plays an important role in promoting economic growth and competing more effectively in the global marketplace. Thus, stock markets in many countries are interested in attracting foreign investment to improve individual stock and overall market liquidity (Kim and Yoon, 2009). So we focus on the impact of foreign investors as institutional investors in Korea on the earnings management practices in this paper.

There are two competing arguments about the potential impact of foreign institutional investors on firms' earnings management activities.

On one hand, foreign investors can be better monitors of the management because they are less likely to have long-term business relations with local firms. Such foreign investors may also have a greater ability to monitor the management through their expertise and experience in various ways to mitigate agency conflicts. Further, they may be less tolerant than domestic investor to the incumbent management's aggressive use of earnings management practices to conceal bad news and protect their private control benefits. These arguments suggest that foreign investors are more involved in monitoring the firm's management, and thus reduce earnings management activities to a greater extent than other investors when investment horizons of foreign investors is long. On the other hand, foreign investors may have significant information disadvantages with

respect to local firms and as a result incur higher monitoring costs. This alternative view implies that foreign investors are associated with more prevalent earnings management practices at firms. Further, there can be a tendency of foreign investors to invest in firms with better financial reporting practices, which implies a reverse causality between foreign investors and the degree of earnings management. But, these monitoring costs can be different in monitoring term. Generally, the longer monitoring term is, the lower the term-to-monitoring costs is. Therefore if foreign investors are long-term investors, they can concentrate on monitoring of the management without regard to monitoring cost than short-term investors. Consequently, we can expect that the longer investment horizons of foreign investors is, the higher their monitoring effectiveness is. And we can also expect that the higher their monitoring effectiveness is, the lower earnings management practice is. Therefore we can also expect that the longer investment horizons of foreign investors is, the lower earnings management practice is. Moreover we can expect investment horizons of foreign investors to affect the degree to which firm managers are monitored. Investors with a shorter horizon have fewer incentives to spend resources in monitoring, as they are less likely to remain shareholders of the firm long enough to reap the corresponding benefits. In addition, they have less time to learn about the firm (Gaspar et al. (2005)). On the other hand, investors with a longer horizon have more incentives to spend

resources in monitoring, as they are likely to remain shareholders of the firm long enough to reap the corresponding benefits. In addition, they have enough time to learn about the firm.

Based on this theoretical background, we can expect that investment horizons of foreign investors influence the quality of accounting income (the earnings management). So hypothesis is set as follows:

H: There is a negative relation between the investment horizons of foreign investors and earnings management.

2.2 Research Methodology

2.2.1 Model Specification

To test the hypotheses, the following regression models are specified:

In Model-(1), we exam the relevance between equity ratio of foreign investors and discretionary accruals as the proxy of earnings management to compare prior paper results

$$\begin{aligned} \text{Model-(1): DA} = & \\ & \alpha_1 + \alpha_2 \text{FOR}_{i,t} + \alpha_3 \text{SIZE}_{i,t} + \alpha_4 \text{LEV}_{i,t} \\ & + \alpha_5 \text{CFO}_{i,t} + \alpha_6 \text{BIG4}_{i,t} + \alpha_7 \text{OWN}_{i,t} \\ & + \alpha_8 \Delta \text{ROA}_{i,t} + \alpha_9 \Delta \text{LEV}_{i,t} + \alpha_{10} \text{Loss}_{i,t} \\ & + \alpha_{11-14} \text{YEAR} + \alpha_{15-23} \text{IND} + \varepsilon_{i,t} \end{aligned}$$

where, for firm i in year t ;

DA = discretionary accruals estimated by method of Dechow et al. (1995)

FOR = equity ratio of foreign investors at the end of fiscal year

SIZE = the natural log of total assets

LEV = total debt/total asset

CFO = current operating cash flow/total asset

BIG4 = an indicator variable that equals one

if the outside auditor for a firms is one of the four major audit firms and zero otherwise

OWN = equity ratio of major shareholder's holdings

$\Delta \text{ROA} = (\text{current total asset} - \text{previous total asset}) / \text{previous total asset}$

$\Delta \text{LEV} = (\text{current total debt} - \text{previous total debt}) / \text{previous total debt}$

Loss = an indicator variable that equals one if firm reported losses and zero otherwise.

YD = the year dummy

IND = the industry dummy

ε = unspecified random factors

In Model-(1), our main interest is the coefficient of FOR. We expect to have a negative coefficient for FOR to compare prior paper results.

In Model-(2), we exam the relevance between equity ratio of foreign investors and investment horizons of foreign investors and discretionary accruals as the proxy of earnings management.

$$\begin{aligned} \text{Model-(2): DA} = & \\ & \alpha_1 + \alpha_2 \text{FOR}_{i,t} + \alpha_3 \text{INV-Term}_{i,t} \\ & + \alpha_4 \text{FOR} * \text{INV-Term}_{i,t} + \alpha_5 \text{SIZE}_{i,t} + \alpha_6 \text{LEV}_{i,t} \\ & + \alpha_7 \text{CFO}_{i,t} + \alpha_8 \text{BIG4}_{i,t} + \alpha_9 \text{OWN}_{i,t} \\ & + \alpha_{10} \Delta \text{ROA}_{i,t} + \alpha_{11} \Delta \text{LEV}_{i,t} + \alpha_{12} \text{Loss}_{i,t} \\ & + \alpha_{13-16} \text{YEAR} + \alpha_{17-25} \text{IND} + \varepsilon_{i,t} \end{aligned}$$

where,

INV-Term = an indicator variable that equals one if investment horizons of foreign investors is more than the median and zero otherwise.

In Model-(2), our main interest is the coefficient of INV-Term and FOR*INV-Term. We expect to have a negative coefficient for

INV-Term and FOR*INV-Term to support hypotheses.

In Model-(3), we exam the interaction of equity ratio and investment horizons of foreign investors on discretionary accruals (earnings management). To do this analysis, we divided full sample into four sample groups for equity ratio and investment horizons of foreign investors. Here, if equity ratio of foreign investors is high and investment horizons of foreign investors is long, it would be FH*TH. If equity ratio of foreign investors is high and investment horizons of foreign investors is short, it would be FH*TL. If equity ratio of foreign investors is low and investment horizons of foreign investors is long, it would be FL*TH. And if equity ratio of foreign investors is low and investment horizons of foreign investors is short, it would be FL*TL.

Model-(3): DA =

$$\begin{aligned} & \alpha_1 + \alpha_2(\text{FH*TH, FH*TL, FL*TH, FL*TL}) \\ & + \alpha_3\text{SIZE}_{i,t} + \alpha_4\text{LEV}_{i,t} + \alpha_5\text{CFO}_{i,t} + \alpha_6\text{BIG4}_{i,t} \\ & + \alpha_7\text{OWN}_i + \alpha_8\Delta\text{ROA}_{i,t} + \alpha_9\Delta\text{LEV}_{i,t} \\ & + \alpha_{10}\text{Loss}_{i,t} + \alpha_{11-14}\text{YEAR} + \alpha_{15-23}\text{IND} + \varepsilon_{i,t} \end{aligned}$$

where,

FH*TH = an indicator variable that equals one if FOR is high and INV-Term is long and zero otherwise.

FH*TL = an indicator variable that equals one if FOR is high and INV-Term is short and zero otherwise.

FL*TH = an indicator variable that equals one if FOR is low and INV-Term is long and zero otherwise.

FL*TL = an indicator variable that equals one if FOR is low and INV-Term is short

and zero otherwise.

In Model-(3), our main interest is the coefficient of FH*TH. We expect to have a negative coefficient for FH*TH to support hypotheses.

2.2.2 Investor Turnover

We measured investor turnover by using the method that was suggested in Gaspar et al. (2005) as follows:

A short-term investor should buy and sell his investments frequently, while a long-term investor should hold his positions unchanged for a considerable length of time. To implement this idea empirically, we calculate for each foreign investor a measure of how frequently they rotate their positions on all the stocks of their portfolio (churn rate). If we denote the set of companies held by investor i by Q , the churn rate of investor i at quarter t is

$$CR_{i,t} = \frac{\sum_{j \in Q} |N_{j,i,t}P_{j,t} - N_{j,i,t-1}P_{j,t-1} - N_{j,i,t-1}\Delta P_{j,t}|}{\sum_{j \in Q} \frac{N_{j,i,t}P_{j,t} + N_{j,i,t-1}P_{j,t-1}}{2}}$$

where $P_{j,t}$ and $N_{j,i,t}$ represent the price and the number of shares, respectively, of company j held by institutional investor i at quarter t . This definition follows those commonly used to assess overall portfolio rotation.

We use investor churn rates to construct a measure of *investor turnover* for the firm that measures the investment horizon of foreign investor in the firm prior to an acquisition announcement. Denote by S the set of shareholders in company k and by $w_{k,i,t}$ the weight of investor i in the total percentage held by foreign investor at quarter t . The

investor turnover of firm k is the weighted average of the total portfolio churn rates of its investors over four quarters:

$$\text{Investor Turnover of firm } k = \sum_{i \in S} w_{k,i,t} \left(\frac{1}{4} \sum_{r=1}^4 CR_{i,t-r+1} \right)$$

In our paper the instant of measurement t is such that at least two full quarters pass between the measurement of all shareholder variables and the announcement date (Gaspar et al. (2005)).

2.2.3 Estimation of Discretionary Accruals (Dechow et al., 1995)

Discretionary accruals are estimated using the modified Jones model (Dechow et al. (1995)). Specifically, the following regression for every firm is estimated as:

$$\frac{TA_{it}}{BTA_{it}} = \alpha_0 + \alpha_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{BTA_{it}} + \alpha_2 \frac{PPE_{it}}{BTA_{it}} + \epsilon_{it} \quad (1)$$

$$DA = \frac{TA_{it}}{BTA_{it}} - \hat{\alpha}_0 + (\hat{\alpha}_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{BTA_{it}}) + (\hat{\alpha}_2 \frac{PPE_{it}}{BTA_{it}}) \quad (2)$$

where TA is total accruals (net income minus cash flow from operations), BTA is beginning total assets, ΔREV is the change in sales revenues, ΔREC is the change in accounts receivable, PPE is property, plant and equipment. Subscript i and t is a firm for any time and superscript hat ($\hat{\cdot}$) is a estimated coefficient.

The first explanatory variable, $(\Delta REV - \Delta REC)/BTA$, represents changes in cash revenues. The change in the cash revenues accounts for the effect of current accruals and represents the normal or non-discretionary

portion of current accruals. This variable should capture a firm's tendency to increase earnings by increasing credit sales toward the end of the fiscal year. In other words, the change in cash sales should not be affected by the front-loading of credit sales. Therefore, this variable should properly capture a firm's tendency to increase the front-loading of credit sales. PPE is used to control for the portion of non-current accruals represented by depreciation expense. The model is scaled by BTA in an attempt to reduce heteroskedasticity. For each year and industry (based on two-digit SIC codes), regression parameters are estimated in Eq.(1). Using the coefficients estimated in Eq.(1), non-discretionary component of total accruals are removed and then the residuals (ϵ_t) are taken as discretionary accruals (DA). Consistent with other studies, DA is assumed to be the outcome of managers' opportunistic choices of accounting process (Kim and Yoon (2009)).

2.2.4 Sample Selection

The sample is drawn from all manufacturing companies listed on the Korea Stock Exchange (KSE) during the four-year period from 2008 to 2011. Financial firms including investment institutions such as banks, insurance companies, funds and security dealers, are excluded from the sample⁽¹⁾. And firms whose fiscal year ends are not December 31 are also excluded. Equity ratio of foreign investors and financial data are retrieved from the KIS-VALUE database. To reduce the impact of outliers on

the results, observations that fall in the top 1% and bottom 1% of the empirical distribution for each variable. Finally, a sample of 1,748 firm-year observations for the four-year period is obtained.

III. Empirical Results

3.1 Descriptive Statistics

Table-1 presents summary statistics for the sample. Overall, the characteristics of our sample are in line with those reported in recent studies.

Table-1 shows the descriptive statistics for the major research variables. The mean of discretionary accruals is 0.003, which is close to zero according to the mechanism used to

<Table-1> Descriptive Statistics for Major Variables (N=1,748)

	Mean	Median	Std. Deviation	Percentiles	
				Min	Max
DA	.003	.002	.098	-0.938	.904
FOR	11.128	0.058	.148	.000	50.426
INV-Term ⁽²⁾	6.628	1.430	18.996	.017	123.263
SIZE	26.64	26.43	1.26	24.285	29.850
LEV	0.440	0.445	0.190	0.082	0.872
CFO	0.487	.043	.086	-.179	.284
BIG4	.730	1.000	.443	0	1.000
OWN	44.627	44.440	15.749	11.030	82.687
ΔROA	.113	.091	.182	-.345	.705
ΔLEV	.175	.109	.401	-.521	1.629
Loss	.160	.000	.369	.000	1.000

DA = discretionary accruals estimated by method of Dechow et al. (1995)

FOR = equity ratio of foreign investors at the end of fiscal year

INV-Term = an indicator variable that equals one if investment horizons of foreign investors is more than the median and zero otherwise

SIZE = the natural log of total assets

LEV = total debt/total asset

CFO = current operating cash flow/total asset

BIG4 = an indicator variable that equals one if the outside auditor for a firm is one of the four major audit firms and zero otherwise

OWN = equity ratio of major shareholder's holdings

ΔROA = (current total asset–previous total asset)/previous total asset

ΔLEV = (current total debt–previous total debt)/previous total debt

Loss = an indicator variable that equals one if firm reported losses and zero otherwise

compute it. Since discretionary accruals are residuals from the equation(1), the expected value of their mean must be zero. The mean of FOR is about 11.1% with a range of 0% to 50.4%. Averages of LEV and CFO are 0.440 and 0.487, respectively. And the outside auditor for a firm is one of Big4 is about 73%. The equity ratio of major shareholder's holdings is about 44.6%. The ratio of firm reported losses is about 16.0%.

3.2 Correlation Test

Table-2 shows Pearson correlation between the main variables. The most noticeable point is that FOR is negatively correlated to DA at the 10% significant level. This means that FOR have contrasting influences as far as earnings management is concerned. And INV-Term is negatively correlated to DA but it is not significant. On the other hands, Pearson correlation is only the results excluding other variables or control variables. So the interpretation of the results is limited.

<Table-2> Pearson Correlation (N=1,748)

	DA	FOR	Inv-Term	SIZE	LEV	CFO	OWN	Loss	ΔROA
DA	1								
FOR	.032 (.099)	1							
Inv-Term	-.002 (.145)	-.493** (.000)	1						
SIZE	.043 (.080)	.497** (.000)	-.066** (.007)	1					
LEV	-.113** (.000)	-.078** (.002)	.240** (.000)	.247** (.000)	1				
CFO	-.128** (.000)	.189** (.000)	-.053* (.034)	.046 (.062)	-.230** (.000)	1			
OWN	.017 (.500)	-.191** (.000)	-.117** (.000)	-.046 (.066)	-.074** (.003)	.017 (.494)	1		
Loss	-.103** (.000)	-.124** (.000)	.061* (.014)	-.106** (.000)	.229** (.000)	-.164** (.000)	-.037 (.139)	1	
ΔROA	.216** (.000)	.072** (.004)	.076** (.002)	.058* (.020)	.081** (.001)	.117** (.000)	-.006 (.800)	-.223** (.000)	1
ΔLEV	.037 (.134)	-.021 (.392)	.061* (.014)	-.009 (.714)	.135** (.000)	-.077** (.002)	-.008 (.740)	-.174** (.000)	.751** (.000)

DA = discretionary accruals estimated by method of Dechow et al. (1995)

FOR = equity ratio of foreign investors at the end of fiscal year

INV-Term = an indicator variable that equals one if investment horizons of foreign investors is more than the median and zero otherwise

SIZE = the natural log of total assets

LEV = total debt/total asset

CFO = current operating cash flow/total asset

OWN = equity ratio of major shareholder's holdings

Loss = an indicator variable that equals one if firm reported losses and zero otherwise

Δ ROA = (current total asset–previous total asset)/previous total asset

Δ LEV = (current total debt–previous total debt)/previous total debt

** and * is significant level at the 1% and 5% respectively (two-tailed).

3.3 Regression Results

3.3.1 Results of regression for equity ratio and investment horizons of foreign investors: Full sample-oriented

Table-3 report the results of the regression for Model-(1) and Model-(2) using full sample. Panel-A is the model that only include FOR as a independent variables to compare previous paper results. In Panel-A, FOR has a negative relevance with DA (earnings management) at the significant level of 5%. This result is same with previous paper results means that the higher equity ratio of foreign investors is, the lower earnings management is. Panel-B is the model that include FOR, INV-Term, and FOR*Inv-Term as a independent variables to exam our hypothesis. In Panel-B, FOR has a positive relevance with DA (earnings management) at the significant level of 10%. This is a reverse result with Panel-A results. And INV-Term doesn't have a significant relevance statistically. On the other hand, FOR*Inv-

Term has a negative relevance with DA (earnings management) at the significant level of 1%. This result means that if equity ratio of foreign investors is high and investment horizons of foreign investors is long, DA (earnings management) would be reduced. This result means that we should consider not only equity ratio of foreign investors but also investment horizons of foreign investors on the impact of foreign investors on the earnings management. So our hypothesis is supported.

**<Table-3> Results of regression for equity ratio and investment horizons of foreign investors
: Full sample-oriented**

Model-(1) (2) : $DA = \alpha_1 + \alpha_2 FOR_{i,t} + \alpha_3 INV\text{-}Term_{i,t} + \alpha_4 FOR * INV\text{-}Term_{i,t} + \text{Control Variables}^{(3)}$

	Panel-A. FOR			Panel-B. FOR & Inv-Term		
	Coef.	t stat.	p stat.	Coef.	t stat.	p stat.
FOR	-.057	-2.031	.042	.131	1.869	.062
INV-Term				.012	.365	.715
FOR*Inv-Term				-.194	-2.697	.007
SIZE	-.039	-1.298	.194	-.078	-2.373	.018
LEV	-.159	-5.556	.000	-.158	-5.382	.000
CFO	-.102	-3.900	.000	-.108	-4.118	.000
BIG4	.020	.775	.438	.023	.885	.376
OWN	-.010	-.387	.699	.006	.253	.800
ΔROA	.244	7.462	.000	.236	7.217	.000
ΔLEV	-.154	-4.704	.000	-.152	-4.648	.000
Loss	.006	.227	.820	.008	.303	.762
YEAR, IND	included			Included		
Adj. R ²	0.067			.071		
F-value	6.825			6.647		

DA = discretionary accruals estimated by method of Dechow et al. (1995)

FOR = equity ratio of foreign investors at the end of fiscal year

INV-Term = an indicator variable that equals one if investment horizons of foreign investors is more than the median and zero otherwise

SIZE = the natural log of total assets

LEV = total debt/total asset

CFO = current operating cash flow/total asset

BIG4 = an indicator variable that equals one if the outside auditor for a firm is one of the four major audit firms and zero otherwise

OWN = equity ratio of major shareholder's holdings

ΔROA = (current total asset–previous total asset)/previous total asset

ΔLEV = (current total debt–previous total debt)/previous total debt

Loss = an indicator variable that equals one if firm reported losses and zero otherwise

3.3.2 Results of regression for investment horizons of foreign investors: Two sample groups-oriented are divided by investment horizons

Table-4 report the results of the regression for Model-(1) using two sample groups are divided into investment horizons of foreign investors. Panel-A is the result of long-term group shows that if investment horizons of foreign investors is long, the higher equity

ratio of foreign investors is, the lower earnings management is. Panel-B is the result of short-term group shows that if investment horizons of foreign investors is short, the higher equity ratio of foreign investors is, the higher earnings management is. As this is a reverse result to previous paper, this means that it is more important to consider investment horizons of foreign investors than equity ratio of foreign investors on the impact.

<Table-4> Results of regression for investment horizons of foreign investors: Two sample groups-oriented according to investment horizons
 Model-(1): $DA = \alpha_1 + \alpha_2 FOR_{i,t} + \text{Control Variables}$

	Panel-A. Long-Term			Panel-B. Short-Term		
	Coef.	t stat.	p stat.	Coef.	t stat.	p stat.
FOR	-.116	-2.901	.004	.145	2.880	.004
SIZE	.105	2.481	.013	.009	.172	.864
LEV	-.122	-3.032	.003	-.149	-3.604	.000
CFO	-.076	-1.919	.055	-.129	-3.522	.000
BIG4	-.009	-.237	.813	.002	.046	.963
OWN	.031	.844	.399	-.012	-.329	.742
ΔROA	.277	5.635	.000	.223	4.572	.000
ΔLEV	-.176	-3.644	.000	-.146	-2.920	.004
Loss	.064	1.668	.096	-.022	-.585	.558
YEAR, IND	Included			included		
Adj. R2	.075			.087		
F-value	4.156			4.868		

DA = discretionary accruals estimated by method of Dechow et al. (1995)

FOR = equity ratio of foreign investors at the end of fiscal year

INV-Term = an indicator variable that equals one if investment horizons of foreign investors is more than the median and zero otherwise

SIZE = the natural log of total assets

LEV = total debt/total asset

CFO = current operating cash flow/total asset

BIG4 = an indicator variable that equals one if the outside auditor for a firm is one of the four major audit firms and zero otherwise

OWN = equity ratio of major shareholder's holdings

$\Delta ROA = (\text{current total asset} - \text{previous total asset}) / \text{previous total asset}$

$\Delta LEV = (\text{current total debt} - \text{previous total debt}) / \text{previous total debt}$

Loss = an indicator variable that equals one if firm reported losses and zero otherwise

3.3.3 Results of regression for investment horizons of foreign investors: Three sample groups-oriented are divided by investment horizons

our hypothesis is supported.

Table-5 report the results of the regression for Model-(1) using three sample groups are divided into investment horizons of foreign investors. Panel-A is the result of long-term group shows that if investment horizons of foreign investors is long, the higher equity ratio of foreign investors is, the lower earnings management is. Panel-B is the result of middle-term group shows that if investment horizons of foreign investors is middle, the equity ratio of foreign investors doesn't have a significant relevance with DA (earning management) statistically. On the other hands, Panel-C is the result of short-term group shows that if investment horizons of foreign investors is short, the higher equity ratio of foreign investors is, the higher earnings management is. As this is same result Panel-B of Table-4, this means that it is also more important to consider investment horizons of foreign investors than equity ratio of foreign investors on the impact of foreign investors on the earnings management. So

**<Table-5> Results of regression for investment horizons of foreign investors:
Three sample groups-oriented according to investment horizons**

Model-(1): $DA = \alpha_1 + \alpha_2 FOR_{i,t} + \text{Control Variables}$

	Panel-A. Long-Term		Panel-B. middle-Term		Panel-C. Short-Term	
	Coef.	t stat.	Coef.	t stat.	Coef.	t stat.
FOR	-.094*	-2.027	-.046	-.765	.152**	2.580
SIZE	-.033	-.688	-.065	-1.073	.012	.178
LEV	-.140**	-2.887	-.176**	-3.345	-.168**	-3.355
CFO	-.105*	-2.248	-.135**	-2.875	-.148**	-3.290
BIG4	-.026	-.554	.018	.397	.008	.180
OWN	.097*	2.282	-.005	-.116	-.026	-.571
ΔROA	.221**	4.100	.229**	3.663	.298**	5.117
ΔLEV	-.157**	-3.014	-.185**	-2.887	-.157**	-2.619
Loss	.024	.513	.035	.780	-.018	-.389
YEAR, IND	included		included		included	
Adj. R2	.111		.062		.113	
F-value	4.369		2.804		4.456	

DA = discretionary accruals estimated by method of Dechow et al. (1995)

FOR = equity ratio of foreign investors at the end of fiscal year

INV-Term = an indicator variable that equals one if investment horizons of foreign investors is more than the median and zero otherwise

SIZE = the natural log of total assets

LEV = total debt/total asset

CFO = current operating cash flow/total asset

OWN = equity ratio of major shareholder's holdings

Loss = an indicator variable that equals one if firm reported losses and zero otherwise

ΔROA = (current total asset–previous total asset)/previous total asset

ΔLEV = (current total debt–previous total debt)/previous total debt

** and * is significant level at the 1% and 5% respectively (two-tailed)

3.3.4 Results of regression for equity ratio and investment horizons of foreign investors: Using the interaction of equity ratio and

investment horizons of foreign investors

Table-6 report the results of the regression for Model-(3) using four sample groups are

<Table-6> Results of regression for the interaction of equity ratio and investment horizons of foreign investors

Model-(3): $DA = \alpha_1 + \alpha_2(FH*TH, FH*TL, FL*TH, FL*TL) + \text{Control Variables}$

	Panel-A. FH*TH		Panel-B. FH*TL		Panel-C. FL*TH		Panel-D. FL*TL	
	Coef.	t stat.						
FH*TH	-.067**	-2.682						
FH*TL			.113**	4.184				
FL*TH					.015	.595		
FL*TL							-.024	-.907
SIZE	-.051*	-1.817	-.109**	-3.629	-.060**	-2.118	-.071**	-2.407
LEV	-.163**	-5.681	-.149**	-5.297	-.148**	-5.206	-.143**	-4.873
CFO	-.106**	-4.072	-.116**	-4.483	-.108**	-4.169	-.111**	-4.247
BIG4	.023	.871	.018	.678	.018	.668	.016	.602
OWN	-.001	-.030	.019	.787	-.002	-.089	.001	.033
ΔROA	.239**	7.330	.230**	7.051	.244**	7.441	.243**	7.430
ΔLEV	-.151**	-4.623	-.150**	-4.609	-.154**	-4.700	-.154**	-4.712
s	.008	.313	.006	.240	.006	.233	.005	.206
YEAR, IND	included		included		included		included	
Adj R2	.069		.075		.065		.065	
F-value	6.991		7.549		6.621		6.646	

FH*TH = an indicator variable that equals one if FOR is high and INV-Term is long and zero otherwise

FH*TL = an indicator variable that equals one if FOR is high and INV-Term is short and zero otherwise

FL*TH = an indicator variable that equals one if FOR is low and INV-Term is long and zero otherwise

FL*TL = an indicator variable that equals one if FOR is low and INV-Term is short and zero otherwise

SIZE = the natural log of total assets

LEV = total debt/total asset

CFO = current operating cash flow/total asset

OWN = equity ratio of major shareholder's holdings

Loss = an indicator variable that equals one if firm reported losses and zero otherwise

ΔROA = (current total asset–previous total asset)/previous total asset

ΔLEV = (current total debt–previous total debt)/previous total debt

** and * is significant level at the 1% and 5% respectively (two-tailed)

divided into equity ratio and investment horizons of foreign investors. Panel-A shows that if firm has a high equity ratio of foreign investors and long investment horizons of foreign investors, DA (earnings management) would be decreased. Panel-B shows that if firm has a high equity ratio of foreign investors and short investment horizons of foreign investors, DA (earnings management) would be increased. This result is same with Panel-B of Table-4. On the other hands, Panel-C and Panel-D show that the interaction of equity ratio and investment horizons of foreign investors don't have a significant relevance with DA (earnings management). Consequently, our hypothesis is supported because coefficient of the variables FH*TH is negative.

IV. Conclusion

In this paper, we examined whether foreign investors facilitate mitigation of managers' use of earnings management on Korea firms. For this study, we used both equity ratio and investment horizons of foreign investors. Especially we focused on the impact of investment horizons of foreign investors on earnings management. We measured investment horizons of foreign investors as the investor turnover is suggested by Gaspar et al. (2005).

We found that equity ratio of foreign investors and investment horizons of foreign investors can reduce the firm's use of earnings management, while this relationship is more robust for investment

horizons of foreign investors. Our results imply that when institutions' investment strategy is aligned with the long term growth of firms, their presence has a positive impact on managers' behavior. Therefore, it can be more important to consider for investment horizons of foreign investors than equity ratio of foreign investors on the impact of foreign investors on the earnings management by this paper. We hope that this study can help Korea market be more developed.

Notes

- (1) Because their firm characteristics are very different from those of manufacturing firms.
- (2) In descriptive statistics, INV-Term variables is not dummy variable but continuous variable.
- (3) Control Variables = $\alpha_5 \text{SIZE}_{i,t} + \alpha_6 \text{LEV}_{i,t} + \alpha_7 \text{CFO}_{i,t} + \alpha_8 \text{BIG4}_{i,t} + \alpha_9 \text{OWN}_{i,t} + \alpha_{10} \Delta \text{ROA}_{i,t} + \alpha_{11} \Delta \text{LEV}_{i,t} + \alpha_{12} \text{Loss}_{i,t} + \alpha_{13-16} \text{YEAR} + \alpha_{17-25} \text{IND} + \epsilon_{i,t}$

References

- Almazan, A., J. Hartzell, L. Starks (2005), "Active Institutional Shareholders and Cost of Monitoring: Evidence from Executive Compensation", *Financial Management* 34, 5-34.
- Ammer, J., S. Holland, D. Smith, F. Warnock (2012), "U.S. International Equity Investment", *Journal of Accounting Research* 50, 1109-1139.
- Becht, Marco, J. Franks, C. Mayer, S. Rossi (2009), "Returns to Shareholder Activism: Evidence from a Clinical Study of the Hermes UK Focus Fund", *Review of Financial Studies* 22, 3093-3129.
- Chen, X., J. Harford, and K. Li (2007), "Monitoring: Which Institutions Matter?", *Journal of Financial Economics* 86(2): 279-305.
- Cheng, Q., and T. D. Warfield (2005), "Equity Incentives and Earnings Management", *The Accounting Review* 80(2): 441-476.
- Chhaochharia, V., A. Niessen-Ruenzi, A. Kumar (2012), "Local Investors and Corporate Governance", *Journal of Accounting and Economics* 54, 42-67.
- DeAngelo, H., L. DeAngelo, and D. Skinner (1994), "Accounting Choice in Troubled Companies", *Journal of Accounting and Economics* 17 (January): 113-143.

- Dechow, P., R. Sloan, and A. Sweeney (1995), "Detecting Earnings Management", *The Accounting Review* 70: 193-225.
- DeFond, M., and J. Jiambalvo (1994), "Debt Covenant Violation and Manipulation of Accruals", *Journal of Accounting and Economics* 17 (January): 145-176.
- Fang, V., M. Maffett, B. Zhang (2013), "The Effect of Institutional Investment on Financial Reporting Comparability", Working Paper.
- Gasper, J., M. Mass, and P. Matos (2005), "Shareholder Investment Horizons and the Market for Corporate Control", *Journal of Financial Economics* 76(1): 3-43.
- Giannetti, M., L. Laeven (2009), "Pension Reform, Ownership Structure, and Corporate Governance: Evidence from a Natural Experiment", *Review of Financial Studies* 22, 4091-4127.
- Gillan, S., L. Starks (2003), "Corporate Governance, Corporate Ownership, and the Role of Institutional Investors: A Global Perspective", *Journal of Applied Finance* 13, 4-22.
- Hartzell, J., L. Starks (2003), "Institutional Investors and Executive Compensation", *Journal of Finance* 58, 2351-2374.
- Healy, P. and K. Palepu (1993), "The Effect of Firm's Financial Disclosure Policies on Stock Prices", *Accounting Horizons* 7 (March): 1-11.
- Healy, P. and J. Wahlen (1999), "A Review of the Earnings Management Literature and its Implications for Standard Setting", *Accounting Horizon* 13 (December): 365-384.
- Hovakimian and Li (2010), "Shareholder Investment Horizons and Payout Policy", SSRN Working Paper.
- Kahn, C. and A. Winton (1998), "Ownership Structure, Speculation, and Shareholder Intervention", *Journal of Finance* 53(1): 99-129.
- Kim and Jang (2012), "Investment Horizons of Foreign Investors and Corporate Dividend Policy", *Korean Journal of Business Administration* 41(5): 781-812.
- Kim and Yoon (2009), "Impact of Foreign Institutional Investors on Earnings Management: Comparison with Domestic Institutional Investors", *Korean Journal of Taxation Research* 22-2: 1093-1114.
- Ko and Seo (2014), "Revisiting the Monitoring Role of Foreign Investors - Investment Horizons of Foreign Investors and Corporate Tax Avoidance", *Korean Journal of Taxation Research* 31-1: 73-104.
- Lee and Byun (2013), "Institutional Blockholders and Earnings Management", *Korean Journal of Accounting Administration* 18-3: 251-273.
- Li, D., F. Moshirian, P. Pham, J. Zein (2006), "When Financial Institutions are Large Shareholders: The Role of Macro Corporate Governance Environments", *Journal of Finance* 61, 2975-3007.
- Leuz, C., K. Lins, F. Warnock (2010), "Do Foreigners Invest Less in Poorly Governed Firms?", *Review of Financial Studies* 23, 3245-3285.
- Ramalingegowda, S., Y. Yu (2012), "Institutional Investors and Accounting Conservatism", *Journal of Accounting and Economics* 53, 98-114.
- Ryu (2014), "Investment Horizons of Foreign Investors and Quality of Accounting Earning and Value Relevance", Pusan National University.
- Schipper, K. (1989), "Commentary on Earnings Management", *Accounting Horizons* 3(4): 91-102.
- Shleifer, A., R. Vishny (1986), "Large Shareholders and Corporate Control", *Journal of Political Economy* 94, 461-488.
- Ugur Lel (2013), "The Role of Foreign Institutional Investors in Restraining Earnings Management Activities across Countries", Working Paper.
- Useem, M. (1996), *Investor Capitalism*, Basic Books, New York.
- Watts, R. and J. Zimmerman (1986), *Positive Accounting Theory*, Englewood Cliffs, N.J., Prentice-Hall.