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DOES FOREIGN OWNERSHIP INCREASE FINANCIAL REPORTING QUALITY?

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ABSTRACT

Using panel data, this paper investigates how foreign ownership affects the financial reporting quality of firms listed on the Korean Stock Exchange (KSE), one of the highest foreign-investor capital markets in the world during the period from 2000 to 2005. Existing studies suggest that foreign ownership may either increase or decrease the quality of financial reporting, suggesting that foreign ownership is explained using two conflicting hypotheses: The active-monitoring hypothesis and the transient hypothesis. In emerging markets, where family ownership is predominant, conservatism is an important measure of financial reporting quality because conservatism decreases opportunistic management behaviours and mitigates information asymmetries. This paper tests conservatism as a proxy for financial reporting quality using three piecewise accrual models, proposed by Ball and Shivakumar (Journal of Accounting Research, 44, 207–256 (2006)); the cash flow model, the Dechow and Dichev model, and the Jones model. This research finds that foreign ownership is positively associated with conservatism in all three models. This result supports the active-monitoring hypothesis of foreign ownership, indicating that foreign ownership mitigates managerial opportunism, thereby increasing the quality of financial reporting.

Keywords: foreign ownership, quality of financial reporting, conservatism, Korea, panel data

INTRODUCTION

Due to sustained globalisation, foreign owners are now major institutional shareholders around the world. According to investigations by the Korean Stock Exchange (KSE), foreign ownership in Korean listed firms accounted for 13.5%[1] of US firms' total equity, 35.7% of that of UK firms, 40.1% of that of French firms, 20.1% of that of German firms, and 26.7% of that of Japanese firms as of 2006. Specifically, in emerging countries, financial globalisation and liberalisation allow foreign ownership to play a key corporate governance role. Most previous literature on the role of foreign ownership in corporate governance

in emerging countries focuses on the significant benefits from foreign participation due to effective monitoring of the controlling shareholders or family ownership (Kho, Stulz, & Warnock, 2009; Aggarwal, Erel, Ferreira, & Matos, 2011). Motivated by rapid inflows of foreign investors into the Korean capital market, this study examines the association between foreign ownership and the degree of financial reporting quality of Korean firms listed on the KSE during the sample period from 2000 to 2005.

The Korean data provide several unique features that are well suited to test the effects of foreign ownership on conservatism as a proxy of financial reporting quality. First, Korean laws strictly prohibited both hostile and foreign mergers and acquisitions (M&As) before the Asian financial crisis of 1997. In addition, foreign ownership was restricted until the end of 1997; foreign individual investors were forbidden to hold more than 7% of shares, and foreign ownership as a group could not exceed 26% of total shares. These laws protected the incumbent controlling shareholders from outside investors. In December 1997, the ceiling on foreign equity ownership was raised from 26% to 55% of total shares outstanding. This ceiling was completely eliminated in May 1998. As a result, in 2004, foreign investors accounted for 43.6% of the total market value of the KSE. This figure was the fourth highest in the world, following Hungary (72.6%), Finland (55.7%), and Mexico (46.4%)[2]. After the global financial crisis of 2008, foreign ownership in the KSE fell by 25.6%, but Korea still ranked as one of the highest foreign-investor countries in the world[3]. With increased equity participation of foreign shareholders, foreign shareholders demand improvement in the financial reporting quality of Korean firms. Thus, the Korean sample provides a good environment for testing the effects of foreign ownership on financial reporting quality resulting from foreign investment liberalisation and a rapid increase in foreign ownership. Second, not much attention has been given to the impact of foreign ownership on financial reporting quality. Most prior studies on foreign ownership have focused on the cost of capital (Henry, 2000), economic growth (Bekaert, Harvey, & Lundblad, 2011), and stock price (Bae, Ozoguz, Tan & Wirjanto, 2012). Conservatism is an important measure of financial reporting quality in emerging countries with opaque disclosure systems and weak corporate governance practices, because conservatism reduces the manager's incentives and ability to manipulate accounting numbers and thus reduces information asymmetry and the deadweight losses that information asymmetries generate, thereby increasing firm and equity values (LaFond & Watts, 2008; Balakrishnan, Watts, & Zuo, 2015). The main purpose of removal of the foreign ownership limitation in Korea was increasing financial reporting quality with the professional knowledge and adept skills in corporate governance afforded by foreign firms. Because most firms in Korea are family firms, corporate governance mechanisms have not effectively operated due to controlling family ownerships. Firms with large foreign ownership expect to

disclose their earnings conservatively because of sophisticated foreign investors, generally from countries with well-developed corporate governance practices.

This study expects to contribute the literature on foreign shareholders as participants in the corporate governance mechanisms of a country, with their necessary incentives and their expertise in monitoring (Sachs & Warner, 1995; Kang & Stulz, 1997; Grinblatt & Keloharju, 2000), by analysing what impacts they exert upon a firm's financial reporting quality when such investors become part of the corporate governance structure. As a large institutional shareholder, there are two conflicting views on foreign shareholders: active monitoring and the transient hypothesis. According to the active-monitoring hypothesis, foreign shareholders play an important role in monitoring management to protect their interests (Sachs & Warner, 1995) and to resolve their own information asymmetries (Kang & Stulz, 1997). However, in the view of the transient hypothesis, foreign shareholders are just short-term investors and thus do not have significant incentives to monitor firms' management (Graves, 1988; Kim, Krinsky & Lee, 1997). While local capital market participants in emerging countries fail to efficiently check and control firm activities, it has been widely acknowledged that foreign shareholders assume important roles in monitoring management as institutional shareholders or as outside directors (Sachs & Warner, 1995). The role of foreign investors as outside monitors of corporate governance activities, as expected, would be even bigger in Korea because of higher foreign-investor holdings, compared with other countries. Despite the importance of foreign ownership and financial reporting quality in emerging countries in recent years, empirical studies of the relationships between foreign ownership and financial reporting quality are very limited. This study is able to fill the gap. Accordingly, this study provides important evidence that foreign shareholders as an outside monitor in emerging markets affect financial reporting quality by focusing on the impact on foreign ownership exerted by the foreign shareholders.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Definition of Conservatism

According to the Statement of Financial Accounting Concepts (SFAC) No. 2 of the Financial Accounting Standards Board (FASB), conservatism is defined as "*a prudent reaction to uncertainty and an attempt to ensure that uncertainty and risks inherent in business situations are adequately considered.*" Under conservative accounting, expenses or losses are immediately recognised, whereas revenues or gains are not realised until uncertainties surrounding economic events are resolved. For example, conservatism is the use of the lower of cost or

market value in valuing inventories. In addition, conservatism uses the rule that accrued net losses should be recognised on firm purchase commitments for goods in inventory. Similar to SFAC No. 2, the International Financial Reporting Standards (IFRS) use prudence as the same concept as conservatism (Grambovas, Giner & Christodoulou, 2006). The International Accounting Standards Board (IASB) *Framework* paragraph 37 states that "*prudence is the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated*." In the concept of transparency, the quality of financial reporting can be measured by conservatism. The SEC Recommendation No. 8 defines criteria for determining financial reporting quality as the degree of aggressiveness or conservatism of accounting principles and underlying estimates. Ball, Kothari and Robin (2000) and Ball, Robin and Wu (2003) assert that conservatism captures financial statement transparency.

Why Conservatism is Important in Emerging Countries?

Specifically, conservatism is important to East-Asian emerging countries as a measure of the quality of financial reporting. In East Asian emerging-market countries, a substantial number of firms are owned and managed by controlling families (Claessens, Djankov & Lang, 2000), and controlling family shareholders in East Asian countries tend to take advantage of flexibility and discretion over accounting choice and auditor selection to distort the firm's true earnings performance (Fan & Wong, 2002). Ball et al. (2003) find that earnings quality (transparency) of four East Asian countries (Hong Kong, Singapore, Malaysia, and Thailand) is low, despite having high-quality accounting standards (e.g., IFRS and U S Generally Accepted Accounting Principles, GAAP), because controlling family ownership overrides incentives to report higher-quality earnings. During the Asian financial crisis, many firms in East-Asian countries became bankrupt. These bankruptcies were linked to accounting frauds such as overstating profits and diminishing liabilities. For example, the Daewoo group, the second largest business group in Korea, was alleged to have organised Asia's biggest single accounting fraud—false accounting during the Asian financial crisis that inflated the value of Daewoo's equity by USD$32 billion. Rezaee (2002) argues that most accounting frauds result from overstatement of earnings. The majority of accounting frauds involve aggressively applied GAAP (Lobo & Zhou, 2006).

Imhoff and Thomas (1989) suggest that higher quality of earnings is most closely associated with conservative accounting methods and full financial disclosure. Penman and Zhang (2002) suggest that conservative accounting practice affects both earnings quality on income statements and the financial items quality on

balanced sheets. Ball et al. (2000) argue that conservatism is a property of accounting income and captures financial statement transparency, because the timely recognition of economic loss in accounting income attempts to force managers to stem their losses more quickly and attempts to reduce investment risk for investors. Accordingly, conservatism plays a corporate governance role by monitoring management, debt, and other contracts. Conservative accounting income imposes higher verifiability duty of economic income recognition than that of economic losses (Watts, 2003a). Watts (2003a) argues that conservatism constrains managerial opportunistic behaviours and offsets managerial biases with its asymmetrical verifiability requirement. A higher level of conservatism in the calculation of earnings requires greater verifiability of revenues relative to expenses, and this serves to reduce the opportunistic behaviour of managers to report higher earnings for their own self-interest. In addition, higher conservatism in the calculation of earnings decreases the likelihood that earnings will omit concurrent economic losses, thereby reducing investors' potential losses due to flawed earnings information. Ball and Shivakumar (2005) argue that the demands for higher quality of financial statements are reflected in the greater legal obligations of issuers, managers, and auditors to recognise economic losses in a more timely fashion. Lara, Osma and Penalva (2009) find strong governance firms show significantly higher levels of accounting conservatism, because strong-governance firms tend to use discretionary accruals to provide information to users about bad news in a timelier manner. Thus, conservatism reduces management's opportunistic behaviours to increase (decrease) income (losses), thus increasing the quality of financial reporting and transparency.

Two Conflicting Views of Foreign Ownership

The role of foreign shareholders as institutional shareholders is controversial and is explained using two conflicting hypotheses: active monitoring and transient hypotheses. According to the active-monitoring hypothesis, institutional investors are long-term investors with significant incentives to actively oversee managers. The monitoring of managers has the characteristics of a public good, and as a result, outside block shareholders would be able to monitor the managers for the purpose of increasing firm value and quality of financial reporting.

Sachs and Warner (1995) argue that foreign investors assume important roles in monitoring management similar to the roles played by large outside shareholders in emerging countries because foreign investors have positive incentives to protect their wealth. Using Indian data, Khanna and Palepu (2000) find that shareholding by foreign investors is positively correlated with firm value, which implies that the foreign institutional investors are equipped with the incentive to monitor firms' activities and have the advanced firms' monitoring systems. More recently, He and Shen (2014) investigated the impact of foreign investors on the

informational efficiency of share price in Japanese firms, and they found increased foreign ownership improved share price efficiency. In emerging markets, foreign institutional investors in China significantly reduced expropriation by controlling shareholders because foreign investors were less related to political pressures and positively monitored invested firms (Huang & Zhu, 2015). After the removal of foreign ownership limitation in Taiwan, foreign investors contributed significant growth to the Taiwanese capital market and increased the voluntary disclosure of Taiwan firms (Lien, Tseng & Wu, 2013). Thus, foreign shareholders seem to play a valuable monitoring role as a large institutional investor. External monitoring by foreign investors as large institutional investors can constrain the opportunities for discretionary choices of management in providing financial accounting information, thereby increasing financial reporting quality.

On the other hand, the transient investor hypothesis suggests that institutions are transient investors without significant incentives to monitor firm management. Institutions are likely to sell the firm stock in the absence of current profits instead of trying to monitor management to adopt value-increasing policies. Based on the transient investor hypothesis, foreign investors are momentum traders and prefer to invest in specific firms, such as large firms paying high dividends. Kang and Stulz (1997) find that foreign investors in Japanese firms hold shares in large manufacturing firms with good accounting performance, lower unsystematic risk, and lower leverage, which implies that foreign investors are more knowledgeable and informed of firms than domestic investors. Grinblatt and Keloharju (2000) report that domestic investors are less sophisticated and take the opposite position to that of more sophisticated foreign investors in the Finnish market. They interpret that foreign investors tend to pursue momentum strategies, but domestic investors seem to be contrarian. Dahlquist and Robertsson (2001) argue that the extent of the deviation for foreign investors from holding the market portfolio is mostly similar to institutional investors. They find that foreign portfolio investors underinvest in firms with a dominant owner and invest more in large firms, firms paying low dividends, and firms with large cash positions on their balance sheets in the Swedish market. Choe, Kho and Stulz (2005) find that foreign investors in Korea are more likely to be momentum investors than domestic investors. This result implies that foreign investors are sophisticated investors but transient institutional investors.

Foreign Ownership in Korea and Conservatism

Large outside blockholders can effectively monitor management using enough voting control and thereby reduce agency problems (Shleifer & Vishny, 1986). Specifically, in emerging markets, large outside ownership is positively associated with firm performance (Sachs & Warner, 1995; Mitton, 2002;

Lemmon & Lins, 2003). Foreign ownership of Korean firms was very small and was not likely to affect firms' decisions until the Korean government opened the capital markets to foreign investors in 1992. Since then, foreign ownership has gradually increased, and foreign institutional investors have become more major institutional investors after the foreign investors' ownership limitation was lifted in 1998. For instance, market capitalisation owned by foreign investors was 37.3% of the total market value of the Korean Stock Exchange as of 2006. This figure is the third highest in the emerging market space, following Hungary (77.7%) and Mexico (45.1%). Thus, in Korea, the potentially positive impact of foreign shareholders can be understood as the special application of the more general proposition that large outside blockholders can mitigate family managerial opportunism. Thus, it is expected that the role of foreign investors as outside monitors of corporate activities would be even bigger in Korea, because foreign investors in Korean firms are less likely to be related to controlling shareholders. In addition, foreign investors have a higher burden of monitoring costs, due to greater information asymmetries (Kang & Stulz, 1997; Choe et al., 2005). Foreign investors will therefore positively strengthen their monitoring functions to resolve information asymmetries.

As to the Korean context, Cheon (2003) finds a significant positive association between foreign ownership and the earnings response coefficient, because foreign shareholders consider earnings quality (measured as discretionary accruals) in their investment decisions. By examining the relationships between information asymmetries and foreign ownership, Ahn, Shin and Chang (2005) find that foreign ownership prefers firms with lower discretionary accruals and forecast errors and larger analyst coverage (number of analysts). Accordingly, in Korea, the active-monitoring hypothesis may more fit foreign ownership consisting of large institutional shareholders than the transient hypothesis. Choi, Sul and Cho (2011) document that foreign block investors have a preference for firms with enhanced management accountability, and they take into account in selecting shares for their block investment whether a firm has strong corporate governance practices.

To the extent that external monitoring by foreign investors is intense and effective, the opportunities for discretionary choices in providing accounting information become more constrained. To protect their wealth and to reduce monitoring costs, foreign shareholders have stronger incentives and expertise to independently monitor firms. Thus, higher proportions of foreign ownership induce firms to improve transparency and to decrease opportunistic managerial accounting choices and decisions. Based on these arguments, the following hypothesis for the association between foreign ownership and conservatism is tested:

Hypothesis: Foreign ownership is positively associated with accounting conservatism in Korean firms.

METHODOLOGY

Sample Selection and Data Collection

This study uses Korean firms listed on the KSE for six years (2000–2005). However, Korean firms' data are for the fiscal years 1999 to 2006 because the measurement of accrual quality using Dechow and Dichev's (2002) model requires previous and future cash flows from operation (CFO) data. All financial institutions with two-digit Standard Industry Classification (SIC) Codes[4] of 65, 66, and 67 (e.g., commercial banks, insurance firms, security brokerage firms) are excluded because accounting methods and the format of financial statements differ from those of other industries and are subject to different regulatory requirements.

The data in this study are obtained from three sources: The KSE, firms' business reports (equivalent to the US 10-K) and audit reports, which are available for *Data Analysis, Retrieval and Transfer System*[5] (DART; http://dart.fss.or.kr), developed by the Korean Financial Supervisory Commission, OSIRIS[6]; publicly listed companies worldwide provided by the Bureau van Dijk Electronic Publishing (BvDEP), and the Korean Information Service (KIS) database[7].

The sample firms in this study were consecutively listed on the KSE from 1999 to 2006. At the first data collection stage, consecutive list status of the sample firms was confirmed from the KSE web (http://kind.krx.co.kr) using the KSE stock index code. At the second stage, ownership data were all manually collected from the business reports of each firm on the DART system (http://dart.fss.or.kr), provided by the Korean Financial Supervisory Commission. Financial statements data and stock data were obtained from the OSIRIS and KIS databases, respectively. Finally, firms' names on the KSE were used to match information among DART filings, OSIRIS, and KIS. Then, all extracted data were classified into SIC codes. The final sample consisted of panel data from 509 non-financial Korean firms and a total of 3,054 firm-year observations over a six-year period. The sample firms belong to 10 industry groups based on the Korean Standard Industry Classification (SIC).

Table 1
Sample selection procedure and final sample size

This table presents the sample selection criteria, total number of sample firms and total firm-year observation. The data are obtained from three sources: OSIRIS, KIS-VALUE, and DART system. The final sample consists of 509 firm-year observations.

Panel A: Summary of sample selection criteria

Criteria: Descriptions	Number of firm-year
Firm listed on the KSE	644
Less: Financial institution (e.g. SIC 65, 66 and 67)	(52)
Less: Delisted firms	(54)
Less: Firms with missing Data	(29)
Total sample firms	509

Panel B: Number of sample firms, classified into SIC code and industry

No.	Industry group	Number of firms (n = 509)	Ratio (%)
1	Fishing & food	41	8.06
2	Textile & footwear	36	7.07
3	Wood product & other machinery	53	10.41
4	Chemical & rubber-plastic	104	20.43
5	Non-metallic products	68	13.36
6	Electronic & electric manufacture	63	12.38
7	Motor	36	7.07
8	General construction	34	6.68
9	Wholesale & retail	35	6.88
10	Others	39	7.66

Measures of Conservatism

Under conservative accounting, expenses or losses are immediately recognized, whereas revenues or gains are not until uncertainties surrounding economic events are resolved. According to Basu (1997), conservatism is defined as "*the accountant's tendency to require a higher degree of verification to recognize good news as gains than to recognize bad news as losses*."

The most popular and general model to measure conservatism is Basu's (1997) reverse regression stock return model. However, Basu's (1997) model has some potential limitations. First, it cannot distinguish transitory gain or loss components in earnings from random error in accruals (e.g., miscounting

inventory) and from some types of earnings management (Ball & Shivakumar, 2005). Namely, Basu's (1997) model only reflects stock market's reaction to bad news and good news for the firm; it does not recognise a firm's substantial accounting earnings changes due to conservatism. Second, after the Asian financial crisis, almost all Korean firms suffered financial distress, and thus, financial indexes (e.g., stock price, or stock return) were significantly decreased or discounted. Thus, Basu's (1997) model, an association test between earnings and stock return, cannot identify whether a higher level of conservatism results from increased conservative accounting methods or worse firm financial status (Choi, 2007).

To overcome these potential limitations of Basu (1997), Ball and Shivakumar (2005) estimate conservatism using the relationship between cash flows from operations and accruals. They argue that the incremental association between accruals and negative cash flows over the association between accruals and total cash flows represents the degree of conservatism. We test the impact of foreign ownership on conservatism using three different models, proposed by Ball and Shivakumar (2006): Cash flow (CF) Model, Dechow and Dichev (DD) model, and Jones model.

(1) CF model

$$ACC_{i,t} = \alpha + \beta_1 CFO_{i,t} + \beta_2 NCFO_{i,t} + \beta_3 NCFO_{i,t} * CFO_{i,t} + \beta_4 FOREIGN_{i,t} + \beta_5 FOREIGN_{i,t} * CFO_{i,t} + \beta_6 FOREIGN_{i,t} * NCFO_{i,t} + \beta_7 FOREIGN_{i,t} * NCFO_{i,t} * CFO_{i,t} + \sum Year + \varepsilon_{i,t}$$

(2) DD model

$$ACC_{i,t} = \alpha + \beta_1 CFO_{i,t} + \beta_2 CFO_{i,t-1} + \beta_3 CFO_{i,t+1} + \beta_4 NCFO_{i,t} + \beta_5 NCFO_{i,t} * CFO_{i,t} + \beta_6 FOREIGN_{i,t} + \beta_7 FOREIGN_{i,t} * CFO_{i,t} + \beta_8 FOREIGN_{i,t} * NCFO_{i,t} + \beta_9 FOREIGN_{i,t} * NCFO_{i,t} * CFO_{i,t} + \sum Year + \varepsilon_{i,t}$$

(3) Jones model

$$ACC_{i,t} = \alpha + \beta_1 \Delta REV_{i,t} + \beta_2 PPE_{i,t} + \beta_3 CFO_{i,t} + \beta_4 NCFO_{i,t} + \beta_5 NCFO_{i,t} * CFO_{i,t} + \beta_6 FOREIGN_{i,t} + \beta_7 FOREIGN_{i,t} * CFO_{i,t} + \beta_8 FOREIGN_{i,t} * NCFO_{i,t} + \beta_9 FOREIGN_{i,t} * NCFO_{i,t} * CFO_{i,t} + \sum Year + \varepsilon_{i,t}$$

where, for firm *i* and time *t*, and *ACC* is Accruals (Net Income + Depreciation – Cash Flow from Operations) [8]; $NCFO_{i,t}$ is a dummy variable, which takes 1 if $CFO_{i,t}$ is negative, otherwise 0; *CFO* is cash flow from operations; ΔREV is change in revenue; *PPE* is gross property, plant, and equipment; *FOREIGN* is

percentage of equity shares held by all foreign shareholders as of the end of the year, and calculated as the total number of shares held by foreign shareholders divided by the total number of shares outstanding. Because the magnitudes of accrual components vary with firm size, each component except for *FOREIGN* is scaled by average total assets.

Three models, proposed by Ball and Shivakumar (2006), measure conservatism as the incremental coefficient on association between accruals and negative cash flows over the association between accruals and total cash flows. In each model, the incremental coefficient of *NCFO*CFO* corresponds to the degree of conservatism, and thus, positive incremental coefficients are expected for all accruals models. In model (1), (2), and (3), the incremental effects of foreign ownership on accounting conservatism are captured by the positive coefficient on the interaction form (*FOREIGN*NCFO*CFO*). If foreign ownership increases conservatism, the incremental coefficient on (*FOREIGN*NCFO*CFO*) should be positive.

EMPIRICAL RESULTS

Descriptive Statistics and Correlations

Figure 1 represents industry distributions of foreign ownership during the test periods from 2000 to 2005. As shown in Figure 1, the largest industry groups of foreign ownership are "chemical & rubber plastic" and "electronics & electric manufacture", while the smallest are "construction" and "textile & footwear". This feature of foreign ownership supports that foreign shareholders prefer large manufacturing firms with good accounting performance, lower unsystematic risk, and lower leverage, but they underweight smaller and highly leveraged firms (Kang & Stulz, 1997).

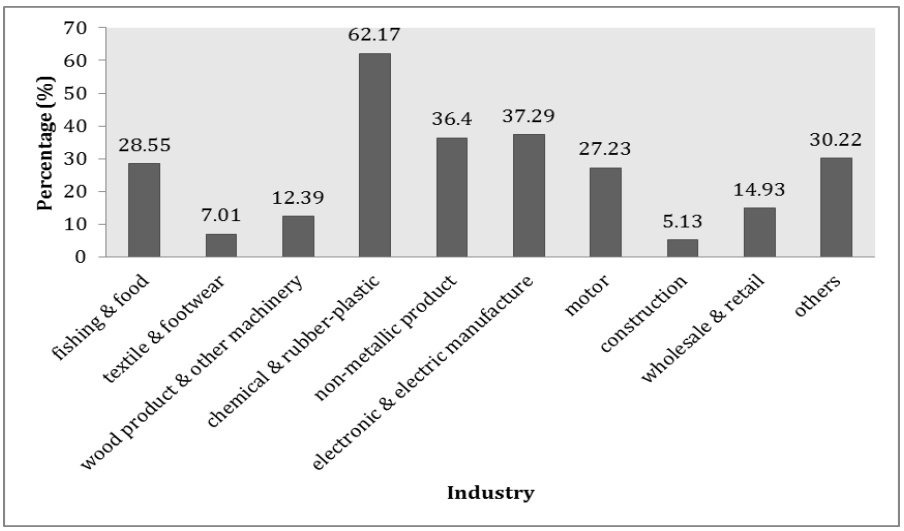

Figure 1. Foreign ownership distribution by industry from 2000 to 2005

Table 2 shows the descriptive statistics for variables. The mean and median of accruals (*ACC*) as dependent variables are –0.042 and –0.035, respectively. Total accruals are calculated as (Net Income + Depreciation – Cash Flows from Operation), following Givoly and Hayn (2000). The mean value of cash flows from operations (*CFO*) is 5.7% of total assets. The mean values of Δ*REV* and *PPE* used in Jones model are 0.037 and 0.464, respectively. Foreign ownership has a mean value of 0.081 and a median value of 0.008. The severe difference between the mean and median of foreign ownership implies that foreign ownership is concentrated in specific firms as shown in Figure 1.

Table 2
Descriptive statistics

	Mean	Median	Minimum	Maximum	Standard Deviation
ACC	–0.042	–0.035	–31.613	21.616	0.759
CFO	0.057	0.054	–8.462	27.680	0.539
Δ*REV*	0.037	0.043	–30.117	11.230	0.742
PPE	0.464	0.393	0.002	0.910	3.192
FOREIGN	0.081	0.008	0.000	0.993	0.144

Table 3 gives the Pearson correlation matrix of variables. Consistent with previous research (Dechow, 1994; Ball & Shivakumar, 2005), total accruals (*ACC*) and cash flows from operation (*CFO*) are negatively correlated (–0.776, $p < 0.01$), as are *ACC* and *PPE* (–0.035, $p < 0.05$). Foreign ownership (*FOREIGN*)

has a negative relationship with *ACC* at the 0.01 level (–0.062), suggesting that total accruals decrease as foreign ownership increases. *CFO* is positively correlated with both Δ*REV* (0.02) and *PPE* (0.052), respectively, at the 0.01 level. Thus, an increase in *CFO* is closely linked to an increase in tangible assets and current sales.

Table 3
Pearson correlation statistics

	ACC	Δ*REV*	*PPE*	*CFO*	*FOREIGN*
ACC	1.000				
Δ*REV*	–0.011	1.000			
PPE	–0.035**	0.225	1.000		
CFO	–0.776***	0.020***	0.052***	1.000	
FOREIGN	–0.062***	0.108***	0.283***	0.048***	1.000

**Significant at level 0.05; ***Significant at level 0.01

Results of Conservatism in Korea

Table 4 reports the results of the regression for foreign ownership and conservatism using the pooled sample of 3,054 firm-year observations over the 2000 to 2005 period. In Table 4, three regression models, (1) CF model, (2) DD model, and (3) Jones model, all seemed to be well fitted, with statistically significant *F*-statistics ($p < 0.01$) and high explanatory power (adjusted R^2).

As expected, the coefficients of $CFO_{i,t}$ in three piecewise linear models shown in Table 4 are all significantly negative (–1.089, –1.085, and –1.343) at the 0.01 level. This result suggests that accruals play an important role in decreasing the noise of cash flows, consistent with the findings of Ball and Shivakumar (2006). However, inconsistent with our expectations, the coefficient of the *PPE* had a significant positive value. According to Yoon and Miller (2002), the Jones model has the highest misspecification problem in the Korean setting, due to the positive sign of the coefficient on *PPE*. Thus, the positive coefficient of *PPE* in this study also supports the finding of Yoon and Miller (2002). The incremental coefficients on *NCFO*CFO* in the three models are significant and positive at the 0.01 level. This result suggests that conservatism exists in Korea. Higher conservatism might be impacted by the Korean corporate governance reforms, launched after the Asian financial crisis. Generally, controlling family shareholders in Korea have positively participated in firms' management, and they also serve as top management such as CEOs and CFOs. In 1998, the legal liabilities of controlling shareholders were broadened to increase their accountability when involved in management in any form. Since April 1999, the

penalties for unfaithful or fraudulent disclosure have been raised substantially. For example, directors who falsify or alter important matters in business reports may be imprisoned for up to five years or receive a fine up to 0.5 billion KRW (US$0.5 million)[9]. Civil liabilities can be imposed on majority shareholders as well as on CEOs and CFOs in an attempt to secure accounting transparency. For instance, after launching corporate governance reforms, the Korean government filed civil suits against 52 former directors of troubled firms and criminal lawsuits against 73 former directors of 27 troubled firms (The Ministry of Finance and Economics, 2002). Strong legal punishment such as *the Sarbanes-Oxley Act 2002* (the SOX) imposes management accountability for providing higher-quality financial reporting. Watts (2003a) indicates that government regulation of financial reporting induces conservatism, because regulators are more often faced with criticism when firms overstate net assets than when firms understate net assets. Watts (2003b) argues that courts generally tend to punish overstatement of earnings/assets more than understatement, because shareholders are more likely to suffer losses when earnings/assets are overstated. Ball and Shivakumar (2005) argue that demands for higher quality financial statements are reflected in the greater legal obligations of issuers, managers, and auditors to recognise economic losses in a more timely fashion. Lobo and Zhou (2006) document evidence that the SOX increase conservatism by imposing significant criminal penalties on management (e.g., CEOs and CFOs). Thus, strong legal punishments are expected to reduce management discretion over financial reporting, thereby increasing conservatism. The results in this study support and correspond with previous research.

Results of Foreign Ownership on Conservatism

To investigate whether foreign ownership increases conservatism in Korean firms, the incremental coefficient on the interaction form (*FOREIGN*NCFO*CCFO*) is employed to capture conservatism. If foreign ownership increases conservatism, the incremental coefficient on (*FOREIGN*NCFO*CCFO*) will be significantly positive.

In the CF model, the incremental coefficient on (*FOREIGN*NCFO*CCFO*) is positively significant at the 0.01 level (2.020). The positive effect of foreign ownership on conservatism remains unchanged in the DD and Jones models. The second column in Table 4 presents the results from the DD model. In the DD model, the value of the incremental coefficient on (*FOREIGN*NCFO*CCFO*) is significantly positive at 0.01 (1.970). Consistent with the results of two models, the value of the incremental coefficient on (*FOREIGN*NCFO*CCFO*) in the Jones model also has a significantly positive value (1.390; $p < 0.01$).

To summarise, three conservatism models show strong positive impacts of foreign ownership on conservatism. Consistent with prior research (Cheon, 2003; Choe et al., 2005), foreign ownership increases conservatism to resolve information asymmetries and to monitor opportunistic managerial accounting choices and decisions, thereby increasing the quality of financial reporting and transparency. Thus, the hypothesis of this study is well supported, indicating that the active-monitoring hypothesis of foreign ownership is accepted in Korea.

Fixed Effect (FE) Results of Foreign Ownership on Conservatism

As this study utilises panel data, panel-study methodology should be considered. The advantages of panel-data methodology lie in more robust information, more variability, less collinearity among variables, more degrees of freedom and more efficiency (Baltagi, 2005). The pooled-OLS, the basic estimation method in this study, treats time-series data of a firm just as different firms at a point in time, but this method is similar to cross-sectional analyses in that it does not control for unidentified inter-firm differences. According to Himmelberg, Hubbard and Palia (1999), the choice of ownership structure depends on unobserved firm characteristics such as contractual, regulatory, or informational environments. With panel data, one common treatment of this unobserved time-constant effect is to use fixed-effect (FE) regression, known as least square dummy variable (LSDV) analysis (Wooldridge, 2002; Baltagi, 2005). Himmelberg et al. (1999) suggest that firm fixed effect estimators should be used in examinations of the relationships between ownership and firm performance because the cross-sectional variation in ownership explained by unobserved firm heterogeneity is a firm fixed effect. The general way of choosing between fixed effects and random effects are the Hausman (1978) tests. This study conducts Hausman tests for whether a fixed effect model is acceptable against the alternative of a random effects model. For samples in this study, the Hausman test rejects a random effects model; thus, a fixed effect model is applied to test robustness.

Table 4
Pooled regression results

	Expected Sign	CF Model	DD Model	Jones Model
Constant	?	–0.012	–0.011	–0.019
ΔREV	+			0.110***
PPE	-			0.026***
$CFO_{i,t}$	-	–1.089***	–1.085***	–1.343***
$CFO_{i,t-1}$	+		–0.012	
$CFO_{i,t+1}$	+		0.010	
NCFO	?	–0.008	–0.007***	–0.013
*NCFO*CFO*	+	1.117***	1.128***	1.337***
FOREIGN	?	–0.079**	–0.076*	–0.130***
*FOREIGN*CFO*	?	1.191***	1.182***	1.461***
*FOREIGN*NCFO*	?	0.380***	0.382***	0.386***
*FOREIGN*NCFO*CFO*	+	2.020***	1.970***	1.390***
Adjusted R^2		0.653	0.652	0.676
F-Statistics		471.615***	404.629***	415.168***

*Significant at level 0.10; **Significant at level 0.05; ***Significant at level 0.01

Table 5 represents the fixed effect estimation as a robustness check method. The negative coefficients of $CFO_{i,t}$ remain strongly significant in all three piecewise linear models applied to fixed effects (–0.567, –0.612, and –0.477, $p < 0.01$). Other variables in the fixed effect results are highly consistent with the results obtained from the pooled-OLS model. The incremental coefficients on (*FOREIGN*NCFO*CCFO*) are reinforced in all three models following the pooled-OLS. In the CF model, DD model, and Jones model, the incremental coefficients on (*FOREIGN*NCFO*CCFO*) are significantly positive (4.659, 4.433, and 4.996) at the 0.01 level in a fixed effect model, respectively.

As discussed in pooled regression results, the positive effect of foreign ownership on conservatism should be accepted due to findings of a positive association with total accruals on several tests of conservatism. Moreover, the results of our fixed effect model strongly support the positive effects of foreign ownership on conservatism as a proxy for financial reporting quality. Consequently, in Korea, higher foreign ownership increases accounting conservatism, thus playing an important role in monitoring management to supplement domestic institutional investors in an emerging market.

Table 5
Fixed Effect (FE) regression results

	Expected Sign	CF Model	DD Model	Jones Model
Constant	?	–0.019***	–0.012***	0.004
ΔREV	+			0.037***
PPE	–			0.066***
$CFO_{i,t}$	–	–0.567***	–0.612***	–0.477***
$CFO_{i,t-1}$	+		0.073***	
$CFO_{i,t+1}$	+		–0.014*	
NCFO	?	–0.007	0.006	0.006
*NCFO*CFO*	+	0.098	0.219	–0.207
FOREIGN	?	–0.081	–0.062	–0.095*
*FOREIGN*CFO*	?	0.378***	0.328***	0.259***
*FOREIGN*NCFO*	?	0.389***	0.350***	0.411***
*FOREIGN*NCFO*CFO*	+	4.659***	4.433***	4.996***
Year Fixed Effects		Included	Included	Included
Industry Fixed Effects		Included	Included	Included
Adjusted R^2		0.857	0.861	0.836
F-Statistics		28.738***	29.743***	29.096***

*Significant at level 0.10; **Significant at level 0.05; ***Significant at level 0.01

CONCLUSION

This study investigates whether foreign ownership increases conservatism in Korean firms using 3,054 firm-year panel data of Korea over the 2000 to 2005 period. Specifically, this study uses three piecewise accruals models, proposed by Ball and Shivakumar (2006): (1) CF model, (2) DD model, and (3) Jones model.

Foreign ownership as a major institutional shareholder is explained using two conflicting hypotheses: the active-monitoring hypothesis and the transient hypothesis. Prior researchers (Sachs & Warner, 1995; Khanna & Palepu, 2000) have found that foreign shareholders, in emerging markets, have stronger incentives and expertise to independently monitor firms to protect their wealth and to reduce monitoring costs. In addition, financial reporting conservatism plays an important role in measuring financial reporting quality in emerging markets, dominated by controlling family shareholders (or ultimate owner). Conservatism constrains managerial opportunistic behaviours and reduces information asymmetries to require greater verifiability of revenues than that of

expenses, thereby increasing the quality of financial reporting.

In advance, there are two potential limitations related to future research. First of all, the tested period in this study is rather dated. To test more extensive associations between foreign ownership and financial reporting quality, the testing period should be expanded, although the data collection required considerable effort. Second, financial reporting quality may differ depending upon the legal/judicial regime of foreign ownership. Differences between common-law and code-law regimes affect the financial reporting quality and corporate governance systems (Ball, 2001). Thus, more efforts could also be made to explain who foreign owners are and from where they came.

This study provides empirical evidence of the effects of foreign ownership on financial reporting quality in emerging markets. Consistent with the active-monitoring hypothesis of foreign ownership, this study finds that foreign ownership increases conservatism, and this finding is supported by all three models. In addition, this result is confirmed by fixed effect estimation. Thus, higher proportions of foreign ownership induce firms to improve transparency and provide higher-quality financial reporting.

NOTES

1. In 1970, foreign ownership was only 3% of total US firm's equity (the NYSE Fact Book).
2. The Korean Stock Exchange (2005). *Largest stockholder and foreign stockholder, end of 2004* [in Korean].
3. As of 2013, foreign ownership in the Korean Stock Exchange reached 35%.
4. SIC is a two-digit code classifying all industries into 20 major industry groups administered by the Korean National Statistical Office. The two-digit code designates each major industry group. This description is available on web source: https://kssc.kostat.go.kr:8443/ksscNew_web/ekssc/main/main.do
5. As a public database, Data Analysis, Retrieval and Transfer System (DART) is an electronic disclosure system that mandatorily enforces firms to submit Business Reports (equivalent to the US 10-K) to Korean Financial Supervisory Commission (KFSC) within 90 days from the fiscal year end, where it becomes publicly available to investors and other users online.
6. The financial statements information of Korean firms on OSIRIS is provided by the Korean Information Service (KIS).
7. KIS is a credit rating agency in Korea and provides corporate financial and ownership information on publicly traded firms as well as privately held firms. KIS also receives financial and ownership information of Korean firms from the Korea Financial Supervisory Board and checks the integrity of the data. It provides the most comprehensive database available in Korea.
8. Givoly and Hayn (2000).

9. Article 207-3, The Korean Securities and Exchange Law.

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