Relation between Corporate Governance and Earnings Mangement, and the Role of IFRS: Evidence from Korea*

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Abstract

Korea has adopted International Financial Reporting Standards (IFRS) since 2011 to mitigate information asymmetry between internal and external users by delivering sufficient and informative disclosure. However, IFRS may be an alternative purpose for managers to maximize their utilities by using discretions. This study examines whether discretionary accruals (DA) or real earnings management (RM) are influenced by the adoption of International Financial Reporting Standards (IFRS) in Korea, and then investigates whether the role of corporate governance to constrain DA or RM is different. Also, we investigate whether DA was replaced by RM after the mandatory adoption of K-IFRS since 2011. Recent studies show that it is difficult for managers to use DA when regulations strengthen. Our results find that the intensity of RM increases after IFRS era, suggesting IFRS do a role as regulation because information users, auditors as well as regulators have difficulties to detect RM. Meanwhile, the extent of DA or RM is smaller in firms with good corporate governance after the adoption of IFRS. These results imply that the magnitude of RM can be increased by giving discretion to manager in IFRS era and that corporate governance still plays an important role as a determinant of earnings management.
1. Introduction

Corporate governance is a series of decision-making processes and structures to monitor and control a company's or executives' activities in order to attain company's goals (La Porta et al. 2000). Problems associated with the corporate governance are caused by the trade-offs between shareholders and managers or among shareholders, which is closely connected with agency costs. Regarding corporate governance, there have been many studies on the correlations between specific shareholding rate or management ownership rate and enterprise value or earnings management. In Korea, there have been existed various problems of the corporate governance related with the peculiar type of chaebol, circular equity investment structure, etc.: there is a view on that these problems brought about the financial crisis in 1997 (Johnson et al. 2000). Corporate governance problems in Korea have been removed a lot since the financial crisis, yet the efficiency of Korean companies is not high, compared to that of North American or European ones.

This fact can be confirmed through the accounting transparency index, which is affected by corporate governance: the Korean index remains the lowest position in the level of the OECD although Korea has introduced various corporate accounting reform bills since 2003 affected by the Sarbanes-Oxley Act of 2002. This is resulted from various factors, but the inefficiency of the Korean GAAP and corporate governance can be a decisive factor. Therefore, Korea has adopted International Financial Reporting Standards (hereinafter IFRS) since 2011 to mitigate intransparency of capital market. It means that the adoption of IFRS is expected to not only enhance quantity or quality of disclosure but increase reliability of financial information. IFRS based on the principle-based accounting can also give discretion to firm's managers so that they can present market participants with information reflecting their substance of the companies compared to the previous Korean GAAP (hereinafter, K-GAAP). In other words, IFRS enable companies to give a chance to reduce information asymmetry between internal and external users by delivering sufficient and informative disclosure. However, there may be an alternative purpose for managers to maximize their utilities by using discretions granted in K-IFRS (Francis and Wang 2008; Ball 2009).

The difference of the corporate governance significantly influences earnings management of executives. It can be
interpreted as agency costs between shareholders and managers if the earnings management intended by managers lowers firm values. However, there also exist contrary opinions. After Berle and Means (1932) first mentioned the separation of ownership and control, the agency costs theory by Jensen and Meckling (1976) explained that if controlling shareholders’ shareholding rate increases, firm values should be higher through lowered agency costs between equity holders and managers. While according to recent studies, agency costs are involved by not only between owners and managers but also between shareholders, i.e. controlling shareholders and minority ones; higher shareholding rate of major shareholders increases agency costs between controlling shareholders and minority ones, which negatively affects enterprise values.

In the cases of Korea, one of the main causes of the financial crisis is vulnerability of the corporate governance that impedes to monitor managers’ activities, which corresponds with the theories of La Porta et al. (1998, 1999 and 2000). According to La Porta et al., where legal protection for the minority shareholders remains weak, there are more possibilities of opportunistic activities of controlling shareholders and incentives to infringe on minority's interests. In companies of North America or European countries, where ownership and control separate comparatively well, the importance of agency costs between owners and managers is emphasized; in firms of developing or East Asian countries including Korea, separation of ownership and control is not well established, thereby emphasizing the importance of agency costs between controlling and minority shareholders.

Theories on corporate governance are classified into two: the expropriation of minority shareholder hypothesis and the convergence of interest hypothesis. According to the former hypothesis, if the shareholding rate of controlling shareholders is increasing, a motivation will exist for managers to report their income higher than the actual figures; the latter estimates that higher shareholding rate of controlling shareholders seduces managers into reporting their income lower than the real. Prior researches have focused on verifying which hypotheses corresponds with characteristics of Korea.

Managers have different incentives with types of corporate governance. Existing studies have described that managers are not active subjects but passive ones who are apt to be affected by controlling shareholders and have tendency to report their income to satisfy specific aims. However, it cannot conclude that managers have incentives to report their income higher or lower than the actual depending on the level of shareholding rates of controlling shareholders. Instead, managers do have incentives to adjust their incomes according to managers’ own shareholding rate or compensation system. Hence this study examines how each case affects earnings management, classifying cases into two:
owner-manager and employed-manager, and focusing on the shareholding rate of the chief executive officer (CEO) not that of controlling shareholders. It will be reasonable that owner-managers are inclined to adjust their incomes not to infringement shareholders’ interests because managers are shareholders at the same time; employed-managers tend to adjust their incomes to maximize their interests even though these activities violate shareholders’ interest. Existing studies have tendency to substitute shareholding rate of managers for that of controlling shareholders including the most dominant shareholder and the specially-interested; in the present situation where people can obtain data on whether the CEO is a controlling shareholder or not, it can be better to examine the relationship between earnings management and the data rather than using the proxy index, controlling shareholding rate.

Meanwhile, existing studies have examined the degree of earnings management through discretionary accruals. However, earnings management comes from real-activity earnings management (RM) as well as discretionary accruals (DM). Therefore, it can be taken into account whether manager can use either accruals (DM) or cash from operations (RM) in order to confirm the effect of the system such as corporate governance or adoption of IFRS. Thus, we divide earnings management into DM and RM and examine how each earning management level would be changed during post-IFRS period compared to pre-IFRS period. Also, we investigate whether DM was replaced by RM under minority shareholder ratio after the mandatory adoption of K-IFRS since 2011. Recent studies show that it is difficult to use DM for the earnings management when regulations such as Sarbanes-Oxley Act strengthen (Cohen 2008). It means that managers can use RM more frequently because information users, auditors as well as regulators have difficulties to detect RM if K-IFRS do a role as regulation.

By inspecting directions and types of earnings management, this study will provide more information than existing studies and helps overcome the present situation that corporate governance is inefficient. Various established studies have also presented irrelative results between corporate governance and DM or conflict results according to empirical results; this study is expected to help better understand and interpret directions and types of each earning management depending on adoption of K-IFRS. Also, we show the existence of trade-offs between shareholders and managers or among shareholders and implies the possible existence of the optimal corporate governance which minimizes agency costs depending on situations.

2. Prior Studies and Hypotheses

Studies on corporate governance and characteristics of managers can usually be classified into two: Studies which represent that agency costs between shareholders and
managers will increase in the case of separated shares ownership, i.e., the influence of employed-managers; researches which indicate that agency costs between controlling shareholders and minority ones will be increasing in the case of converged shares ownership, i.e., the influence of owner-managers. According to the agency theory by Jensen and Meckling (1976), if the degree of dispersion between ownership and management is increasing, the agency costs will be also increasing since managers can possess more discretionary powers to act; companies with convergence of shareholding are able to monitor intensively their managers and then, the enterprise value will be increasing. Morck et al. (1998)’s study also supported this idea that if ownership and control are centralized, the values of shareholders will be increasing because of declined conflicts among interested parties.

While recent studies present that centralized ownership gives a negative effect on the wealth of minority shareholders. According to La Porta et al. (1998, 1999 and 2000), there exist the trade-offs between controlling shareholders and minority ones, which are regarded as the agency costs between shareholders. This opinion means that the convergence of shareholding rate obstructs the firm value, which is contrary to the study of Jensen and Meckling (1976). The view of La Porta et al. applies well in cases of East Asian countries including Korea. Johnson et al. (2000) suggest that the problems of corporate governance are a key factor of the East Asian financial crisis in 1997 and the higher degree of convergence of shares ownership brings on violating more interests of minority shareholders.

In Korea, Park (2003) examines the correlation between shareholding rate of the most dominant shareholder and earnings management of managers; he empirically verify significant positive correlation between the most dominant shareholder’s shareholding rate and discretionary accruals, which means that in a company with higher shareholding rate of the most dominant shareholder, its managers have more incentives to increase their income using discretionary accruals.

The implementation of IFRS leads to an improvement in earnings quality (Barth et al. 2008). Prior studies also recognize the benefits of IFRS adoption, including greater comparability, reduced earnings management, more effectiveness of corporate governance (Ipino and Parbonetti 2011; Marra et al. 2011). Marra et al. (2011) also confirm that IFRS adoption helps board effectiveness due to the higher level of disclosure and transparency inherent in IFRS. However, Van Tandeloo and Vanstraelen (2005), Daske et al. (2011) suggest that financial quality of voluntary IFRS adopters is not ameliorated. Furthermore, managers may use discretion granted in K-IFRS for maximizing their utilities (Francis and Wang 2008; Ball 2009). Thus, prior studies investigating the effect of IFRS adoption give mixed evidence.

Meanwhile, there are recently some papers that focus on the effect of IFRS on
earnings management. Callao and Jarne (2010) examine whether the adoption of IFRS in the European Union has intensified discretionary accruals by comparing pre- with post-IFRS era. Their results show that discretionary accruals have increased since the adoption of IFRS, implying that IFRS can give discretion to the firms’ managers. On the other hand, Kim (2014) shows that the adoption of IFRS in Korea decreases discretionary accruals. These results suggest that IFRS mitigate information asymmetry between managers and outsider by disclosing increased footnotes.

Prior studies that focus on the effect of IFRS on earnings management mostly confirm discretionary accruals (hereafter DM). However, Field et al. (2001) conclude that recently research made limited progress in expanding our understanding of accounting choice because of limitations in research design. That is, most of studies on earnings management are involved in DA, but studies on real-activity earnings management (hereafter RM) that affects cash flows have existed partially (Roychowdhury 2006).

Mande et al. (2000) proved that managers use short-term decision making of discretionary controlling the expenditure for research and development expenses according to economic conditions. Gunny (2010) investigated four types of earnings management i.e. research and development expenses, selling and administrative expenses, gains on disposal of long-term assets and investment assets, and diminishment of COGS through RM of current period exert a negative influence on future operating activities. Roychowdhury (2006) developed a model of measuring RM which aims to increasing earnings through price cutting, over-production of inventories and reduction of discretionary expenditures.

Mizik et al. (2008) insisted that the market does not properly evaluate a company that carries out earnings management at the time of seasoned equity offerings. It is because the earnings management through RM aiming higher income report is carried out more than through DM. According to Edelstein et al. (2008), American investment companies in real estate have to pay out 90% of net income for the current year by the federal law, and he showed that these companies increased expense and reduced net income using RM to reduce amounts of their obligatory dividend.

Coulton et al. (2008) confirmed that a manager use RM in the fourth quarter mainly to meet earnings objectives. And they added the type of earnings management can be altered according to the purpose of financial reporting. Cohen and Zarowin (2010) showed that RM as well as DM is used at the time of seasoned equity offerings and these have significant negative (-) correlation meaning these have a relation of contradiction. Zang (2012) confirmed that DM and RM can be used as substitutes for each other. And he confirmed that there is the sequence between these two, i.e. using RM firstly, then DM secondly. And a company’s manager who has litigation risks
switches using DM to depending on RM, from this result, it can be asserted that there exists the trade-off relationship between RM and DM. This hints that RM is a type of earnings management that is hardly exposed than DM.

In the cases of the United States, there are various researches including Cohen et al. (2008), which support that since the introduction of the Sarbanes-Oxley Act of 2002, also known as the Public Company Accounting Reform and Investor Protection Act of 2002, types of earnings management has been changed. In other words, after the introduction of the SOX Act, earnings management has been transformed from DM to RM. Ipino and Parbonetti (2011) examine whether managers substitute DM for RM after IFRS become mandatory. They find a decrease (increase) in DM (RM) for mandatory IFRS adopters only in country with strict enforcement regimes. These results imply that managers can replace RM by DM when facing tighten accounting standards or strict enforce regimes, because it is more difficult to detect RM (Ewert and Wagenhofer 2005; Graham et al. 2005).

Managers have incentives to adjust firms’ earnings to maximize their private interests under the authority. Studies so far have recognized that managers adjust their incomes under their discretionary power to act, thereby focusing on earnings management by discretionary accruals. However, methods to examine earnings management can be divided into two: earnings management by using DM or RM. Hence choose managers the method with their purpose when adjust their earnings. Minority shareholders are not easy to access internal information on the firms. Therefore, they prefer to expand the amount of firms’ disclosure in order to reduce agency costs. IFRS can reduce information gap between managers and investors. This means that the adoption of IFRS can mitigate earnings management using information asymmetry. IFRS adoption also helps board effectiveness due to the higher level of disclosure and transparency inherent in IFRS (Marra et al. 2011). That is, IFRS can provide investors more faithful information reduce agency costs among shareholders, because information on fair values is provided through IFRS and increasing disclosure of footnotes includes more information comparing to local GAAP (Gassen and Sellhorn 2006; Christensen et al. 2008). Therefore, a firm whose dispersion of ownership is high tends to adopt IFRS early in Korea (Shawn and Jung 2013). The adoption of IFRS, on the other hand, can give an effect on strict accounting policy or regimes to the firm whose dispersion of ownership is high. Therefore, the firms having the high ratio of the minority shareholders can use RM rather than DM. To sum it up, we can set up a hypothesis as follows.

**Hypothesis:** Companies with high dispersion of ownership will substitute DM for RM after IFRS become mandatory.
3. Research Design

3.1 Multivariate Model

To identify hypothesis, we use regression analysis. Our regression model describes as follow.

\[ EMI_t = \beta_0 + \beta_1 IFRS_{it} + \beta_2 RMS_{it} + \beta_3 IFRS^{*}RMS_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 OCF_{it} + \beta_7 GROWTH_{it} + \beta_8 RFS_{it} + \beta_9 BIG4_{it} + \beta_{10} NEGE_{it} + \beta_{11} \sum IND_{it} + \epsilon_{it} \]  

(1)

EM\(_{it}\): level of each earnings management for firm \(i\) in year \(t\), that is, each earnings management means discretionary accruals or real-activity earnings management

IFRS\(_{it}\): 1 if year is after 2011 and 0 otherwise

RMS\(_{it}\): ratio of minority shareholder for firm \(i\) in year \(t\) (= 1 minus ratio of the largest shareholder and related party ownership)

SIZE\(_{it}\): natural logarithm of total assets for firm \(i\) in year \(t\)

LEV\(_{it}\): total debt divided by total equity for firm \(i\) in year \(t\)

OCF\(_{it}\): Operating Cash Flow for firm \(i\) in year \(t\)

GROWTH\(_{it}\): growth rate of sales for firm \(i\) in year \(t\)

RFS\(_{it}\): ratio of foreign shareholder for firm \(i\) in year \(t\)

BIG4\(_{it}\): 1 if firm \(i\)'s auditor is big4 and 0 otherwise

NEGE\(_{it}\): 1 if firm \(i\)'s net income is negative and 0 otherwise

IND: industry dummy variable

Our model expects, after the adoption of IFRS, if IFRS are strict accounting practices, that is, if the increasing of earnings quality and the effectiveness of corporate governance under IFRS era will be higher, the regression coefficient of \(\beta_1\) is expected to have positive (+) value; however, this results may be changed by dependent variables, DM or RM. In other to confirm how the distribution of ownership related corporate governance affects each earnings management such as DM or RM after the introduction of IFRS, we include RMS, which signifies a ratio of minority shareholder, that is, one minus the largest shareholder and related party ownership at the ending of fiscal year. If the decentralization of ownership has a favorable effect on each earnings management, the regression coefficient of \(\beta_2\) is expected to have negative (-) value; under the diversified ownership, firms decrease earnings management in order to mitigate information asymmetry between majority shareholders and minority ones. Moreover, if minority shareholders demand higher quality of accounting practice after the adoption of IFRS, the regression coefficient of \(\beta_3\) is expected to have significant negative (-) value.

Meanwhile, leverage of liabilities (LEV), asset size of a firm (SIZE) and the growth rate of total assets (GROWTH), all of which are considered to influence the size of earnings management, are also included in this model as control variables (DeFond and Jiambalvo 1994; Watts and Zimmerman 1986). If the growth rate of the firm
Relation between Corporate Governance and Earnings Management, and the Role of IFRS

(GROWTH) is high, managers can report higher returns for tax purposes. Operating Cash Flow (OCF) is used to control not only firms’ size and their earnings management (Dechow et al. 1995). As auditor's size or reputation becomes higher (BIG4), earnings management will decrease because the auditor will try to increase accounting transparency to elevate their own reputation. We include the ratio of foreign shareholders (RFS) as control variables for earnings management (Bamber et al. 2010). Finally, we consider loss firm (NEGE) because loss firm may affect reporting way in order to reduce the deficits (Bugstahler and Dichev 1997; Bamber et al. 2010).

3.2 Proxies of Earnings Management

3.2.1 Accrual-based Earnings Management (DM)

We use discretionary accruals (DM) as the proxy of accrual-based earnings management. For the measurement of these adjustments, we use the Adjusted Jones Model (1995), frequently used in various previous studies. And, the Adjusted Jones Model is as follows:

\[
TA_{it}/A_{i,t-1} = a_0[1/A_{i,t-1}] + b_1[(\Delta REV_{it} - \Delta REC_{it})/A_{i,t-1}] + b_2[PPE_{it}/A_{i,t-1}] + \varepsilon_{it} \tag{2}
\]

where \(i, t\) are firm and year, respectively. 

\(TA_{it}\): total accruals; \(\Delta REV_{it}\): the change of Sales of the firm \(i\) in the year of \(t\), as compared from the year of \(t-1\); \(\Delta REC_{it}\): the change of account receivables from trade of the firm \(i\) in the year of \(t\), as compared from the year of \(t-1\); \(PPE_{it}\): gross property, plant and equipment. \(A_{i,t-1}\): total assets of the firm \(i\) in the year of \(t-1\). And; \(\varepsilon_{it}\): the residual.

Total accruals (TA) are computed from net income minus cash flows from operating activities (OCF). And discretionary accruals are calculated by subtracting non-discretionary accruals from total accruals.

3.2.2 Real Activity Earnings Management (DM)

One of most favored proxies of real activity-based income adjustments is the model used by Roychowdhury (2006), which is intended to capture the abnormality level of cash flows from operating activities (OCF), production costs and discretionary expenses. And Zang (2012) and Gunny (2010) increased the validity of this method by verifying this proxy of Roychowdhury (2006) empirically.

The details of real activity-based income adjustments from those three variables in the above can be stated as follows:

1) OCF: A company can accelerate point of sales by price discounts or relief of credit conditions.
2) Production costs: A company can lower the cost of sales by increasing production volumes.
3) Discretionary expenses: A company can reduce cash outflows by decreasing discretionary expenses including advertising expenses, research & development expenses.
and selling and administrative expenses.

Roychowdhury (2006) uses the method of the actual amounts minus the normal amounts which are considered as not exercising real activity-based income adjustments, to measure abnormal amounts of OCF, production costs and discretionary expenses. Meanwhile, the normal amounts of OCF, production costs and discretionary expenses are computed from the method developed by Dechow, Kothari and Watts (1998) as it is. In the viewpoint of DKW (1998), the normal OCF is tacitly considered to have a linear relationship with the sales amounts and the change of sales amounts. And the details of equations are as follows:

\[ \text{OCF}_{it}/A_{i,t-1} = a_0[1/A_{i,t-1}] + b_1[\text{Sales}_{it}/A_{i,t-1}] + b_2[\Delta \text{Sales}_{it}/A_{i,t-1}] + \varepsilon_{it} \quad (3) \]

The cost of production is defined as the sum of the cost of goods sold (COGS) and the change of inventories. We can derive this below equation from equation (4), as it is acceptable that the relationship between the COGS and sales of certain year is almost linear.

\[ \text{COGS}_{it}/A_{i,t-1} = a_0[1/A_{i,t-1}] + b_1[\text{Sales}_{it}/A_{i,t-1}] + \varepsilon_{it} \quad (4) \]

The change of inventories can be derived as follows:

\[ \Delta \text{INV}_{it}/A_{i,t-1} = a_0[1/A_{i,t-1}] + b_1[\Delta \text{Sales}_{it}/A_{i,t-1}] + b_2[\Delta \text{Sales}_{i,t-1}/A_{i,t-1}] + \varepsilon_{it} \quad (5) \]

When using equation (4) and equation (5), the normal costs of production can be derived as follows:

\[ \text{Prodo}_{it}/A_{i,t-1} = a_0[1/A_{i,t-1}] + b_1[\text{Sales}_{it}/A_{i,t-1}] + b_2[\Delta \text{Sales}_{it}/A_{i,t-1}] + b_3[\Delta \text{Sales}_{i,t-1}/A_{i,t-1}] + \varepsilon_{it} \quad (6) \]

The normal discretionary expenses are the sum of advertising expenses, research & development expenses (R&D) and selling and administrative expenses (SG&A). In this paper, we consider the normal discretionary expenses in the current year have a linear relationship with sales in the prior year as we adopt the method used by Cohen et al. (2008). If we apply sales in the current year in the model, it will be difficult to capture the decrease in the residual for a case that the management exaggerates sales amount which is not actually occurred; we may have very little residuals in that case, as a result, sales in the prior year is used in the equation. The details of the equation are as follows:

\[ \text{DisExp}_{it}/A_{i,t-1} = a_0[1/A_{i,t-1}] + b_1[\text{Sales}_{i,t-1}/A_{i,t-1}] + \varepsilon_{it} \quad (7) \]

We can calculate the abnormal OCF, the abnormal production costs and the abnormal discretionary expenses. And, in using these three factors to output the proxy of the real earnings management, we calculate the standardized variable by connecting all of these three factors to be denoted as RM.

3.3 Sample Selection

Korea has adopted IFRS since 2011. First,
we divide sample periods into pre-IFRS (2008~2010) and post-IFRS (2011~2013). We get financial information and stock prices of the companies from KIS-VALUE of Korea Information Service and TS-2000 of Korea Listed Companies Association as follows.

1. KOSPI- or KOSDAQ-listed companies which settle their accounts in December
2. Manufacturing industry except financial business and issues for administration
3. Companies whose financial data can get from KIS-VALUE of Korea Information Service and TS-2000 of Korea Listed Companies Association

To perform empirical studies, we analyzed firms which met the above conditions from 2008 to 2013. The number of the total samples is 9,408.

References