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ANALYSIS OF THE EFFECTIVENESS OF THE PERIODIC AUDITOR DESIGNATION SYSTEM

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Abstract— The periodic auditor designation system was introduced to improve accounting transparency in Korea since 2019. There was a lot of opposition from companies being audited, and calls for its abolition continue to this day. Korean supervisory authorities are also concerned about whether the system will continue. The government was also concerned about the side effect of this system increasing audit fees without improving accounting quality, so it simultaneously promoted efforts to institutionally improve audit quality by introducing standard audit hours. Therefore, this study analyzes the effectiveness of the periodic auditor designation system whether it contributes to improving the accounting transparency of companies from the perspective of conservatism. We also examine the result of companies' perception of the periodic designation system by comparing changes in accounting transparency by year.

Index Terms— accounting transparency, periodic auditor designation system

INTRODUCTION

Korea introduced the periodic auditor designation system which allows the Securities and Futures Commission to designate and appoint external auditors for target companies since November 2019. The reason is that the independence of external auditors, which occurs when companies freely appoint external auditors, is undermined, which prevents external auditors from performing proper accounting audits, and as a result, corporate accounting transparency is deteriorating. In other words, Korea's accounting supervisory authorities introduced this periodic designation system to ultimately improve the accounting transparency of companies by strengthening the independence of external auditors for companies. However, there has not been much research on how effective the introduced system is. This study seeks to examine whether the periodic designation system is effective in improving accounting transparency from the perspective of conservatism. The structure of this study is as follows. Section 2 summarizes the periodic designation system and previous studies and presents the research hypothesis. Section 3 explains the research method and sample selection for hypothesis verification, and Section 4 explains the results of regression analysis. And finally, we summarize the results of this study and describe its contributions and limitations.

Literature Review

Periodic designation system

The periodic auditor designation system was completely revised in 2017 from the "Act on External Audit of Stock Companies" to the "Act on External Audit of Stock Companies, etc." in response to the accounting fraud incident at Daewoo Shipbuilding & Marine Engineering Co., Ltd., and was implemented on November 1, 2019. Afterwards, a periodic designation system was implemented. Companies freely elect external auditors for six years, and for the next three years, the Securities and Futures Commission, established within the Financial Services Commission, appoints external auditors to audit the target companies.

With the implementation of the periodic designation system, the designation of auditors by listed companies has increased significantly. In 2014, the auditor designation rate of listed companies was only 4.6%, but in 2021, 51.1% of listed companies received external audits by designated auditors.

Conservative Accounting

In general, timely and conservative accounting can be said to be transparent accounting (Ball, Kothari and Robin 2000). Basu(1997) said that accounting conservatism refers to the difference in timeliness and sustainability of profits between periods of bad news and good news, and that managers tend to over-recognize accounting profits or net assets, resulting in losses in profits. It was customary to say that accounting should be done conservatively to prevent missing reflections. Basu(1997) analyzed a company's stock price return using a proxy for news. As a result of the analysis, the sensitivity of profits to negative (-) stock returns (bad news) was found to be two to six times greater than the sensitivity of profits to positive (+) stock returns (good news). In addition, negative (-) profit changes are less persistent than positive (+) profit changes, and the earnings response coefficient (ERCs) for positive (+) profit changes are larger than negative (-) profit changes.

Watts (2003a) examined whether the firm-year accounting conservatism measure (C_Score) can be used as a baseline for accounting conservatism and found that the firm-year accounting conservatism measure (C_Score) captures variations in accounting conservatism and asymmetrically measures up to three years. It is said to predict the timeliness of profits. And as a result of the cross-sectional verification, accounting conservatism was found to be proportional to the company's investment cycle, inherent specificity, and information asymmetry.

LaFond and Roychowdhury(2008) stated that the separation of management and ownership causes agency problems and that accounting conservatism can serve as a mechanism to solve agency problems. Assuming that the more severe the separation between ownership and management, the more severe the agency problem and the higher accounting conservatism, and as a result of measuring the asymmetric timeliness of profits, we found that accounting conservatism increases as ownership and management are separated, showing that shareholders demand conservative accounting.

In a study on the relationship between conservatism and accruals, Kim and Bae (2009) divided

accruals into discretionary accruals and non-discretionary accruals and investigated the relationship between each accrual amount and conservatism. As a result of adopting conservatism accounting, conservatism measures and discretionary accruals were studied. There was a negative relationship between accruals and non-discretionary accruals, and the results of analyzing the impact of discretionary accruals and non-discretionary accruals on accounting conservatism showed that companies with high discretionary accruals had significantly higher accounting conservatism. It was reported that the results were contradictory to previous studies and the impact of accounting conservatism on discretionary accruals was inconsistent, so it was unreasonable to interpret that high accounting conservatism means low discretionary accruals.

Choi and Lee (2008) analyzed the impact of potential litigation costs related to the introduction of a class action system on the accounting selection process using discretionary accruals estimated using Basu(1997)'s conservatism model and the modified Jones model (2005). It was reported that the increase in litigation costs is influencing conservative accounting choices. It was also said that it would contribute to improving accounting transparency in the future by influencing conservative accounting choices for potential litigation costs.

Research Hypothesis and Method

Research Hypothesis

In this way, studies on discretionary accruals of companies designated as auditors have mixed results, with studies showing that discretionary accruals have decreased and studies showing no significant difference in discretionary accruals. In previous studies on the periodic designation system, research results showed that no significant difference could be found in discretionary accruals between designated and non-designated companies.

The periodic designation system was introduced with the purpose of increasing corporate accounting transparency by improving the independence of external auditors, and a study on conservatism in the auditor designation system showed that the conservatism of companies with appointed auditors was strengthened and that conservatism was strengthened after designation compared to before designation. There is a possibility that the results strengthened conservatism.

Therefore, research hypothesis 1 is established in the form of a null hypothesis as follows.

Research Hypothesis 1: The implementation of the periodic designation system would not change corporate accounting conservatism.

Penman and Zhang (2002) and Watts (2003) stated that conservative accounting has a positive effect on corporate value because companies that use conservative accounting have a high stock price-to-profit multiple. On the other hand, Dechow (1994), Warfield and Wild (1992), Schipper and Vincent (2003), etc. argue that conservatism distorts the principle of revenue and cost correspondence, making it difficult to predict future profits based on current profits, and making it difficult to predict future profits in time series. It is said that it reduces the sustainability of

profits and value relevance by causing (-) autocorrelation.

Baek Won-soon and Lee Su-ro (2004) reported that as a result of an empirical analysis of 3,579 company-years between 1990 and 2001, sustainability was lower and the stock price-to-profit multiple was smaller in the case of conservative accounting than in the case of non-conservative accounting.

If companies strengthen conservatism in accounting processing by being conscious of the periodic designation system and the market evaluates that accounting transparency has increased as a result, the value of accounting information will increase and have a positive impact on stock multiples, but the strengthening of conservatism will reduce profit sustainability. If it is highlighted that it may decrease, it will have a negative impact on the stock multiple. Therefore, the null hypothesis is set as follows.

Research hypothesis 2; The implementation of the periodic designation system will not affect the price/earnings multiple.

Through research hypotheses 1 and 2, we examine changes in the conservatism of all companies in the market according to the periodic designation system and the resulting market response.

Research Model

We integrated the Basu (1997) model which is a representative conservatism measurement into Khan and Watts (2009) model.

Basu (1997) defined conservatism as "the tendency to recognize bad news earlier than good news" and presented a model to measure accounting conservatism through the relationship between profit margin and stock return as follows:

$X_{it}/P_{i,t-1} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it} * DR_{it}$ ---------(1)

Xit: Earnings per share of company i in fiscal year t (hereinafter omitted)

Pi,t-1: Stock price for fiscal year t-1 (based on closing price)

Rit: Stock price return

D: 1 if Rit < 0, otherwise 0

Basu (1997) considered that if Rit (stock return) < 0, bad news occurred in fiscal year t, otherwise good news occurred, and uses stock return as a proxy for bad news and good news. Basu (1997) stated that the regression coefficient (β0+β1) represents the degree to which bad news is reflected in profits when bad news occurs in fiscal year t of company i, β0 represents the degree to which good news is reflected in profits, and β1 represents the degree to which good news is reflected in profits. It indicates the difference in the degree to which bad news and good news are reflected in the profits, and the larger β1, the higher the conservatism.

Khan and Watts (2009) pointed out that existing conservatism measurement models such as Basu (1997) have difficulty measuring the conservatism of a specific company in a specific year.

Therefore, they introduced the "concept of asymmetric timeliness of profits" into the accounting conservatism model and proposed C_Score, a method of measuring company-year conservatism (Khan and Watts, 2009). Khan and Watts (2009) presented a regression analysis model in which the coefficient of asymmetric timeliness of profits (Basu coefficient) was a linear function of the company's unique characteristics (size, PBR, debt).

Khan and Watts (2009) argue that in accounting conservatism, there is a difference in the level of proof of gains and losses, and this difference also causes a difference (difference in timeliness) when profits and losses are reflected in profits. These differences in timeliness cumulatively lead to underestimation of net worth (Watts, 2003a).

In this study, we use a model that reflects cross-sectional and time-series changes in conservatism in order to conduct an empirical study on conservatism. Khan and Watts (2009) estimated a measure of firm-year conservatism using Basu's (1997) asymmetric timeliness measure. We adopt Khan and Watts (2009) reflecting Basu's (1997) cross-sectional regression model as follows: .

$Xi = \beta1 + \beta2Di + \beta3Ri + \beta4DiRi + ei$ ---------- (2)
Xi: i company's earnings,
Ri: I company's returns
Di: Dummy variable, 1 if $Ri < 0$, otherwise 0

In equation (2), β3 represents a measure of the timeliness of good news, (β3+β4) represents the timeliness of bad news, and β4 represents the difference between the measurements of good news and bad news which is a measure of conservatism.

In addition, Khan and Watts (2009) state that the degree of corporate conservatism changes depending on four factors (contracts, litigation, taxes, and regulations), and that these four factors change depending on the company's investment opportunity (Investment Opportunity Set). As a proxy for opportunity (IOS), the market to book ratio (M/B ratio), size, and debt of the company were used. Ultimately, a company's conservatism varies depending on company characteristics such as M/B ratio, size, and debt. Therefore, the timeliness (G_Score) and conservatism (C_Score) measures of favorable news by year were estimated at the company-year level, and these measures were set as a linear function of the company's unique characteristics by year. G_Score and C_Score equations are as follows:

G_Score: $\beta_3 = \mu_1 + \mu_2 Size_i + \mu_3 M/B_i + \mu_4 Lev_i$ --------- (3)
C_Score: $\beta_4 = \lambda_1 + \lambda_2 Size_i + \lambda_3 M/B_i + \lambda_4 Lev_i$ ----- (4)

By substituting equations (3) and (4) into equation (2), equation (5) below is derived as follows:

$X_i = \beta_1 + \beta_2 D_i + (G\_Score)R_i + (C\_Score)D_iR_i + (\delta_1 Size_i + \delta_2 M/B_i + \delta_3 Lev_i + \delta_4 D_i Size_i +$

$\delta_5 D_i M/B_i + \delta_6 D_i Lev_i) + e_i$ (5)

The term with the regression coefficient δi (i=1~4) in the last part is the interaction term between stock price return and company characteristics.

Sizei: Size of company i,

M/Bi: Market to book ratio of company i,

Levi; Company i's debt size

By calculating the λi (i=1~4) value through regression analysis in equation (5) and substituting this λi (i=1~4) value into equation (3), C_Score, which is a measure of conservatism by company and year, can be obtained. . And by comparing the C_Score for each year, you can see whether conservatism increases or decreases for each company by year.

In this paper, we examine the effectiveness of the periodic designation system by measuring the change in company-year conservatism (change in accounting transparency) before and after the implementation of Korea's periodic designation system using the model of Khan and Watts (2009).

Data and Research Results

Data Description

The accounting information related to this study used data from NICE Evaluation Information Company. The companies subject to analysis were those listed on the KOSPI and KOSDAQ markets from fiscal year 2014 to fiscal year 2022 (excluding the financial industry, which has accounting characteristics that are significantly different from other industries), and for convenience of comparison, it was limited to corporations with a settlement period in December. Company-year data was extracted from Kis-Value for 20203 companies (13520 KOSDAQ companies, 6683 KOSPI companies), of which 19859 companies (13326 KOSDAQ companies, 6533 KOSPI companies) closed their accounts in December. Among them, 3508 (3139 KOSDAQ, 369 KOSPI) company-year data with insufficient market price and accounting information were deleted. Then we obtained 16351 (10187 KOSDAQ, 6164 KOSPI) company-year data. company-year data corresponding to the top and bottom 1% of variables related to C_Score calculation, such as earnings, returns, size, Lev, and M/B, were removed to eliminate outliers, then, we finally extract the total 14989 company-year data.

Descriptive statistics and correlation analysis

Descriptive statistics of E(earnings), R(returns), D, Size, M/B, and Lev, which are related variables for calculating C_Score, are shown in Table 1. The average of E was 0.0252 and the average of R was 0.1805. The average of D, where R is negative (-), is 0.5191, which means that 51.91% of company-year stock returns are negative (-).

< Table 1 > Descriptive statistics

	mean	std	Min	Median	Max
E(earnings)	0.0252	0.1489	-1.1029	0.0378	1.0043
R(returns)	0.1805	0.7175	-0.7106	-0.0187	7.4569
D	0.5191	0.4996	-	-	-
Size	25.7718	1.2139	23.2807	25.5412	30.4596
M/B	1.7326	1.7394	0.1519	1.1764	18.0044
Lev	1.0367	1.4019	0.0140	0.5346	12.3225

E(earnings): Net profit (or operating profit) in year t/(Market capitalization at the end of year t-1)
R(returns): Stock price return, (Market capitalization 3 months after the end of year t/Market capitalization 9 months before the end of year t)
D: dummy variable (1 if returns < 0, 0 otherwise)
Size: ln (market capitalization)
M/B: Market capitalization/Total equity capital
Lev: Total debt/Market capitalization
As a result of the correlation analysis, as shown in Table 2, the correlation coefficient between the variables was relatively low, so concerns about distortion of the regression analysis results due to multicollinearity were low.

< Table 2 > Correlation analysis

	E	R	D	Size	M/B	Lev
E	1.00					
R	0.018*	1.00				
D	-0.076**	-0.607**	1.00**			
Size	0.199**	0.0419**	-0.030**	1.00		
M/B	-0.180**	0.223**	-0.129**	0.200**	1.00	
Lev	-0.049**	-0.0888**	0.082**	-0.021**	-0.318**	1.00

* denotes significant level at the 0.05 and ** denotes at the 0.01

Regression results

The average values of regression coefficients obtained by regression analysis of nine years of data from 2014 to 2020 by year using (Equation 5) are shown in Table 3. Among the coefficients of conservatism-related variables which are D*R, D*R*Size, D*R*M/B and D*R*Lev, the signs of the coefficients of the variables(λ1, λ2, λ4) except the coefficient of D*R*M/B(λ3) were the same (+, -, +) as those predicted by Khan and Watts (2009). The sign of the coefficient (λ3) of D*R*M/B was positive (+), which was different from the results of Khan and Watts (2009) which showed a negative (-) result. Among them, the coefficients of D*R*M/B and D*R*Lev were not statistically significant.

< Table 3> Results of regression analysis

	Coefficients	t-values	p-value
const	-0.477	-0.477	0.041
D	0.070	0.070	0.293
R	-0.438	-0.438	0.175
R*Size	0.016	0.016	0.170
R*M/B	0.005	0.005	0.283
R*Lev	0.006	0.006	0.383
D*R	***2.239***	***2.239***	***0.114***
D*R*Size	***-0.080***	***-0.080***	***0.121***
D*R*M/B	***-0.031***	***-0.031***	***0.241***
D*R*Lev	***0.060***	***0.060***	***0.238***
Size	0.023	0.023	0.006
M/B	-0.029	-0.029	0.000
Lev	-0.011	-0.011	0.140
D*Size	-0.003	-0.003	0.313
D*M/B	-0.003	-0.003	0.411
D*Lev	-0.001	-0.001	0.386

This is the average value of regression coefficient values analyzed by year from 2014 to 2022.

Conclusion

The contributions of this study are as follows: Previous studies analyzed the effectiveness of the periodic designation system on accounting transparency using discretionary accruals. In contrast to previous studies, this study analyzed the effectiveness of the periodic designation from the perspective of accounting conservatism using another different accounting characteristic. In addition, this study examined the effect of the periodic designation system over time by comparing changes in accounting transparency by year across the entire market.

Also, previous studies focused on audit quality through comparison of discretionary accruals

between companies subject to the periodic designation system and companies not subject to the periodic designation system. Thus, they did not not take into account the analysis of companies' perceptions of transparent financial statements.

The periodic designation system does not only affect companies that are immediately designated, but is a system introduced to affect the accounting transparency of all companies potentially subject to designation. Because the purpose of this system is to strengthen companies' sense of responsibility for preparing financial statements, comply with financial statement submission deadlines, and strengthen the accounting audit function of external auditors. Companies must be conscious of the strengthened independence of external auditors and be conscious of accounting transparency not only in the fiscal year in which external auditors are appointed, but in all fiscal years. The ultimate purpose of this periodic designation system is not to strengthen the independence of external auditors, but to enable companies to prepare financial statements transparently with the awareness of strengthening the independence of external auditors.

From this perspective, this paper is very timely as it is the first three years since the implementation of the periodic designation system and is the first year in which companies designated as auditors under the periodic designation system freely appoint auditors. Therefore, measuring yearly changes in accounting transparency across the market would also have its own significance.

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