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Regulatory reinforcement, audit effort, and market perceptions of restatements

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ABSTRACT

This study examines the changes in audit effort and financial restatements following the November 2018 amendment to the External Audit Act in South Korea. Using 2016–2022 as the sample period, it investigates whether restatements differentially affect the value relevance of earnings in the capital market. The findings indicate that the strengthened regulatory framework significantly increased audit effort, as measured by audit hours, total audit fees, and audit fees per hour, which, in turn, increased restatements. Before the External Audit Act was amended, the market interpreted restatements as negative signals, thereby reducing the value relevance of earnings. However, following regulatory reinforcement, such negative perceptions diminished, and this effect was more pronounced in firms with higher audit effort. These results suggest that investors distinguish between restatements stemming from managerial misconduct and those arising from enhanced audit scrutiny in a stricter regulatory environment. By highlighting the mediating role of increased audit effort in the relationship between regulatory reinforcement and financial restatements, this study provides insights into factors that influence the perceived reliability of financial disclosures. It offers implications for accounting standard-setters and policymakers concerned with the broader effects of strengthened regulations on audit practices and market perceptions.

Contribution/Originality: This study provides new evidence on how strengthened audit regulation affects audit effort and reshapes market perceptions of financial restatements, whereas prior studies have generally treated restatements as uniformly negative. The findings offer implications for policymakers by suggesting that restatements resulting from regulatory reform may not necessarily signal poor reporting quality.

1. INTRODUCTION

In South Korea, regulatory authorities implemented a series of institutional reforms following an accounting fraud scandal involving Daewoo Shipbuilding & Marine Engineering, the country's largest shipbuilding company. These reforms were in response to growing concerns over the lack of accounting transparency among Korean firms and aimed to rebuild trust in financial reporting and strengthen the transparency of the capital markets. In this context, the Act on External Audit of Stock Companies (hereafter, External Audit Act) was amended in November 2018 to introduce regulations intended to ensure the reliability of financial information and improve audit quality. Specifically, the revised regulations strengthened the requirements for submitting financial statements before an external audit, improved the auditor appointment process, and imposed stricter penalties for accounting fraud. The assurance level for internal control systems in listed firms increased from review to audit, and the disclosure obligation for key audit matters (KAM) was expanded. Furthermore, a legal basis was established for audit quality

control standards, thereby enabling regulators to evaluate and monitor audit firms more effectively. These institutional changes provide a quasi-experimental setting for examining the effects of strengthened accounting regulations on the capital market. Regulatory reinforcement is expected to enhance audit quality and increase audit effort (Florou, Morricone, & Pope, 2020; Li, Kim, & Park, 2022). This study investigates whether and how regulatory reinforcement shapes firms' disclosure environments by increasing audit efforts. We perform regression analyses using archival and manually collected data on Korean listed firms and examine the mediating effect using structural equation modeling (SEM). The regression results demonstrate that regulatory reinforcement improves audit effort, and the mediation analysis indicates that enhanced audit effort increases financial restatements. Furthermore, this study investigates the capital market's response to the implementation of strengthened regulations. Traditionally, financial restatements are perceived as negative signals that reduce firm value and the value relevance of financial information while increasing capital costs (Chen, Cheng, & Lo, 2014; Hribar & Jenkins, 2004; Palmrose, Richardson, & Scholz, 2004). However, capital markets may interpret financial restatements resulting from increased audit effort driven by regulatory reinforcement as efforts to improve financial reporting quality and respond differently. Our empirical findings indicate that before the regulatory reinforcement, capital markets perceived financial restatements negatively, thereby reducing the value relevance of earnings. By contrast, following regulatory changes, restatements are not interpreted negatively, suggesting a positive market response to the strengthened regulatory environment.

Considering the concerns that strengthened accounting regulations have increased compliance burdens and the likelihood of financial statement revisions, this study provides regulatory insights by showing that an increase in restatements results from greater audit effort and is not necessarily perceived negatively by the market. This study examines how regulatory reinforcement influences corporate disclosure and market reactions through audit effort. It thereby contributes to the literature by highlighting differentiated market responses to restatements after regulatory changes and providing useful implications for future research and policy.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Strengthening legal regulations influences auditor behavior by increasing auditors' responsibilities. Prior studies have shown that stricter regulations increase auditors' liability, resulting in greater audit effort. Kim, Liu, and Zheng (2012) found that regulatory reinforcement following the mandatory adoption of the International Financial Reporting Standards (IFRS) increases audit fees. Choi, Kim, Liu, and Simunic (2008) reported that a country's legal environment plays a crucial role in determining audit effort and audit fees. Furthermore, Choi, Kim, Liu, and Simunic (2009) argued that audit fee premiums are not merely a result of increased audit complexity but are closely related to heightened legal liability. Lamoreaux (2016) found that after the Public Company Accounting Oversight Board (PCAOB) was granted the authority to inspect auditors of foreign Securities and Exchange Commission (SEC) registered firms, those subject to potential inspections provided higher-quality audits. Ke, Lennox, and Xin (2015) concluded that the Big 4 auditing firms provide lower-quality audits to firms listed exclusively in China because of China's weak institutional environment.

Building on prior research, this study hypothesizes that strengthened legal regulations impose greater responsibility on both management and auditors, consequently increasing audit effort. Specifically, audit hours are expected to rise, whereas the auditor's liability is anticipated to result in premiums for total and per-hour audit fees. Thus, the following hypothesis is proposed:

H1a: Audit effort increases following regulatory reinforcement.

Auditors are crucial in ensuring the reliability of financial statements by assessing the materiality of financial reporting errors (Munter, 2022). Proper audit procedures enhance financial reporting transparency by identifying internal control weaknesses and detecting and preventing material misstatements (PCAOB AS 1001; SOX Section 404). In this regard, Lobo and Zhao (2013) reported that increased audit effort driven by strengthened regulations decreases the likelihood of restatements.

However, increased scrutiny may increase the likelihood of restatements if more rigorous auditing procedures uncover past errors (Hribar, Kravet, & Wilson, 2014). In particular, the regulatory reinforcement introduced through the amendment to the External Audit Act, which serves as the focus of this study, provides both firms and auditors with strong incentives to correct pre-existing errors, potentially increasing the frequency of financial restatements. Accordingly, the following hypothesis is formulated:

H1b: Regulatory reinforcement increases audit effort, which subsequently leads to a higher likelihood of financial restatement.

Financial restatements have various implications for capital markets. Prior studies have predominantly taken the view that financial restatements are negative signs, typically accompanied by notable declines in the disclosing firm's market value. Restatements erode investor confidence in financial reporting (Anderson & Yohn, 2002; Wilson, 2008), thereby negatively affecting firm growth and external financing capacity (Albring, Huang, Pereira, & Xu, 2013). Moreover, by increasing information risk, restatements lead to an increase in firms' equity capital costs (Bardos & Mishra, 2013; Hribar & Jenkins, 2004; Kravet & Shevlin, 2010) and trigger adverse consequences, such as class-action lawsuits (Palmrose & Scholz, 2004) executive turnover (Desai, Hogan, & Wilkins, 2006) and board member replacement (Srinivasan, 2005). Amel-Zadeh and Zhang (2015) argued that firms that issue financial restatements are less likely to become acquisition targets and face less favorable terms when they do, highlighting the substantial negative impact of restatements on the perceived reliability of corporate financial information. These adverse market reactions vary depending on several factors, including who drives the restatement process (Hribar & Jenkins, 2004; Palmrose et al., 2004) risk-related factors, such as internal control weaknesses (Cox & Weirich, 2002; Li, Lin, Sun, & Tucker, 2018) and a firm's disclosure practices (Files, Swanson, & Tse, 2009; Gordon, Henry, Peytcheva, & Sun, 2013). Notably, Burks (2011) found that following the implementation of the Sarbanes–Oxley Act (SOX), the initial price reaction to restatements became significantly less negative than in the pre-SOX period, highlighting how regulatory changes can influence capital market responses.

Increased restatements following strengthened regulations can be discussed in a similar context. Prior research suggests that the market generally perceives restatements as negative signals, thereby reducing the value relevance of accounting information. However, if investors recognize restatements as stemming from regulatory initiatives to enhance financial statement reliability, this may mitigate their negative impact. In particular, for new investors with less information than existing shareholders, disclosing reliable financial information can be crucial for investment decisions (Johnstone, 2021; Kaplan & Roll, 1972). If new investors perceive restatements as the outcome of stricter regulations, they may not react negatively, which is likely to be reflected in a firm's market value. Therefore, this study investigates whether the market interpretation of restatements differs between pre- and post-regulatory reinforcement periods. The following hypothesis is proposed:

H_2: Financial restatement disclosures will have different impacts on the value relevance of earnings before and after regulatory reinforcement.

3. DATA AND SAMPLE

This study examines non-financial firms listed in Korea with a December fiscal year-end from 2016 to 2022. Audit-related, stock price, and financial statement data are collected from the FN Guide and TS2000 database. Restatement data are manually collected from the DART.[1] The FN Guide and TS2000 database are similar to Compustat in the U.S. and provide financial information on Korean listed firms. DART is the official disclosure platform for Korean companies and is comparable to EDGAR in the U.S. These data sources are widely used in academic research on Korean firm-level data and are considered reliable. After excluding firm-year observations with insufficient data, the final sample comprises 12,970 observations. Table 1 reports the sample selection process and the composition of the sample.

[1] DART (Data Analysis, Retrieval, and Transfer System) is the disclosure system of the Financial Supervisory Service of South Korea.

Table 1. Sample selection.

Panel A. Sample selection process		
Criteria		**Observations**
Non-financial listed firms from 2016 to 2022		16,745
Less: Samples without audit-related data		1,696
Less: Samples without other financial data		2,079
Total		12,970
Panel B. Sample composition by year		
Year	Observations	%
2016	1,582	12.20%
2017	1,657	12.78%
2018	1,773	13.67%
2019	1,854	14.29%
2020	1,935	14.92%
2021	2,044	15.76%
2022	2,125	16.38%
Total	12,970	100.00%

4. RESEARCH METHOD

The regression model used to analyze the relationship between the introduction of the Revised External Audit Act, audit effort, and financial restatements to test H1 is as follows:

$$Audit\ Effort = \gamma_0 + \gamma_1 RE + \gamma_2 SIZE + \gamma_3 LEV + \gamma_4 ROA + \gamma_5 GROWTH + \gamma_6 ASALES + \gamma_7 INVENTORY + \gamma_8 MB + \gamma_9 FOREIGN + \gamma_{10} LOSS + \gamma_{11} FIRST + \gamma_{12} BIG + \gamma_{13} OPINION + \gamma_{14} CONSOL + \gamma_{15} KOSPI + Industry + \varepsilon_t \quad (1)$$

$$RS = \alpha_0 + \alpha_1 RE + \alpha_2 SIZE + \alpha_3 LEV + \alpha_4 ROA + \alpha_5 GROWTH + \alpha_6 MB + \alpha_7 FOREIGN + \alpha_8 LOSS + \alpha_9 FIRST + \alpha_{10} BIG + \alpha_{11} KOSPI + Industry + \varepsilon_t \quad (2)$$

The regulatory reinforcement variable (*RE*) indicates whether the strengthened External Audit Act was in effect, taking a value of 1 after the introduction of regulatory reinforcement and 0 before. The restatement variable (*RS*) measures the extent to which financial restatements result from regulatory reinforcement, with larger values indicating more severe restatements. Audit effort is proxied by *AHOUR*, *AFEE*, and *FEE_HOUR*, representing audit hours, total audit fees, and audit fees per hour, respectively.

We investigate whether greater audit effort drives an increase in restatements following regulatory reinforcement by testing the mediating effect using the path structure illustrated in Figure 1. Specifically, we examine whether an increase in restatements after regulatory reinforcement stems from a firm's own reporting practices (Path 1) or auditors' increased efforts (Paths 2 and 3). These relationships are analyzed using SEM based on Equation 1 and 3 as follows:

$$RS = \delta_0 + \delta_1 RE + \delta_2 Audit\ Effort\ (AHOUR, AFEE, FEE\_HOUR) + \delta_3 SIZE + \delta_4 LEV + \delta_5 ROA + \delta_6 GROWTH + \delta_7 ASALES + \delta_8 INVENTORY + \delta_9 MB + \delta_{10} FOREIGN + \delta_{11} LOSS + \delta_{12} FIRST + \delta_{13} BIG + \delta_{14} OPINION + \delta_{15} CONSOL + \delta_{16} KOSPI + Industry + \varepsilon_t \quad (3)$$

H2 examines the impact of financial restatements on the value relevance of earnings following regulatory reinforcement. We use Ohlson's (1995) net asset and net income model, which has been widely adopted as a framework in prior studies (Hung & Subramanyam, 2007; Karğın, 2013).

$$MV = \beta_0 + \beta_1 RS + \beta_2 EPS + \beta_3 BPS + \beta_4 RS * EPS + \beta_5 RS * BPS + Industry + Year + \varepsilon_t \quad (4)$$

The key variables of interest are *RS*EPS* and *RS*BPS*, which we use to examine whether the effects of net income (*EPS*) and net assets (*BPS*) on a firm's market value (MV) vary with the severity of restatement (RS) following the implementation of the Revised External Audit Act. Additionally, to ensure the robustness of the model, we analyze the effects of changes in *EPS* and *BPS* on changes in firm market value in relation to the severity of restatement.

Appendixes A and B provide detailed descriptions of the variables and descriptive statistics, respectively. All continuous variables are winsorized at the 1% level.

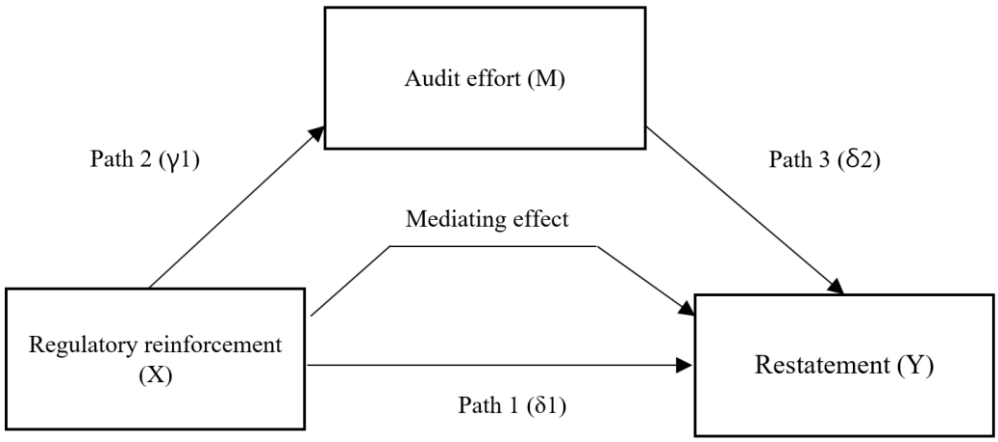

Figure 1. Path analysis.

Note: This figure illustrates the direct and indirect pathways through which regulatory reinforcement influences restatements. Audit effort functions as a mediating mechanism through which regulations indirectly affect restatements. The path coefficient δ_1 measures the direct effect of regulatory reinforcement on restatements, indicating the magnitude of this relationship. The path coefficient γ_1 quantifies the impact of regulatory reinforcement on audit effort, capturing the extent to which regulatory changes result in greater audit effort. The path coefficient δ_2 represents the effect of audit effort on restatements and measures how variations in audit effort contribute to financial restatements. The product of γ_1 and δ_2 estimates the indirect impact of regulatory reinforcement on restatements through audit effort, capturing the extent to which audit effort mediates this relationship. The path analysis is conducted based on Equation 1 and 3.

5. EMPIRICAL RESULTS

5.1. Results for H1

Table 2 presents the regression results for H1a. Panel A shows that audit effort, measured by *AHOUR*, *AFEE*, and *FEE_HOUR*, significantly increased following regulatory reinforcement. Specifically, the coefficients of *AHOUR*, *AFEE*, and *FEE_HOUR* are 0.313 (t = 49.81), 0.520 (t = 64.71), and 0.018 (t = 30.32), respectively, which are statistically significant at the 1% level. The increase in *AFEE* is the largest in magnitude, suggesting that audit fees increase more sharply than audit hours. These findings suggest that auditors conduct more rigorous audits under a strengthened regulatory framework and demand a premium for the heightened liabilities they face.

The results in Panel B of Table 2 show that the coefficient for restatements (*RS*) is significantly positive following regulatory reinforcement (*RE*) at 0.065 (t = 7.28), which is significant at the 1% level. This suggests that restatements have become more frequent after regulatory changes, with more severe restatements exhibiting stronger effects.[2]

Table 2. Effects of regulatory reinforcement on audit effort and financial restatements.

Panel A. Effects of regulatory reinforcement on audit effort (Audit hours, audit fees, and audit fees per hour)									
	Dependent Variable: Audit Effort								
	(1) *AHOUR*			**(2) *AFEE***			**(3) *FEE_HOUR***		
	Coeff.	**t-statistic**		**Coeff.**	**t-statistic**		**Coeff.**	**t-statistic**	
RE	**0.313**	**49.81**	***	**0.520**	**64.71**	***	**0.018**	**30.32**	***
SIZE	0.338	49.14	***	0.335	39.24	***	0.000	-0.40	
LEV	0.201	7.35	***	0.282	7.86	***	0.008	3.59	***
ROA	-0.343	-8.49	***	-0.423	-8.09	***	-0.008	-2.16	**
GROWTH	-0.019	-2.76	***	0.017	1.96	**	0.003	4.90	***
ASALES	0.080	6.74	***	0.072	4.49	***	-0.001	-1.17	
INVENTORY	0.050	0.85		0.076	0.96		0.002	0.29	
MB	0.003	1.58		0.009	3.04	***	0.001	2.58	***
FOREIGN	0.098	1.65	*	0.202	2.82	***	0.009	2.04	**
LOSS	-0.071	-7.50	***	-0.090	-7.09	***	-0.002	-2.52	**
FIRST	0.133	21.00	***	0.207	23.38	***	0.008	14.41	***

[2] In the model, *RE* is an indicator variable denoting the post-regulatory period, and *RS* is an ordinal discrete variable that captures the severity of financial restatements. Considering the characteristics of these variables, the intercept (constant) is not substantively interpretable. Accordingly, its statistically insignificant positive value does not affect the interpretation of the results.

Panel A. Effects of regulatory reinforcement on audit effort (Audit hours, audit fees, and audit fees per hour)

	Dependent Variable: Audit Effort								
	(1) *AHOUR*			(2) *AFEE*			(3) *FEE_HOUR*		
	Coeff.	t-statistic		Coeff.	t-statistic		Coeff.	t-statistic	
BIG	0.329	31.83	***	0.305	23.66	***	-0.003	-4.17	***
OPINION	-0.223	-4.75	***	-0.365	-5.99	***	-0.015	-3.86	***
CONSOL	0.140	21.95	***	0.138	17.32	***	0.000	-0.25	
KOSPI	0.012	1.00		0.027	1.61		0.002	1.43	
Constant	2.639	29.03	***	0.116	1.03		0.087	13.35	***
Industry FE	Included			Included			Included		
Std err clustered by	Firm			Firm			Firm		
N	12,970			12,970			12,970		
Adj. R^2	0.8185			0.7292			0.1492		

Panel B. Effects of Regulatory Reinforcement on Financial Restatements

	Dependent Variable: *RS*		
	Coeff.	t-statistic	
RE	0.065	7.28	***
SIZE	-0.008	-1.37	
LEV	0.082	2.77	***
ROA	-0.048	-0.90	
GROWTH	0.014	1.09	
MB	0.004	1.49	
FOREIGN	-0.005	-0.08	
LOSS	-0.057	-4.04	***
FIRST	0.070	5.70	***
BIG	-0.020	-1.86	*
KOSPI	0.003	0.18	
Constant	0.094	1.32	
Industry FE	Included		
Std Err Clustered by	Firm		
N	12,970		
Adj. R^2	0.0206		

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

To examine H1b, we test the mediating effect using SEM. As shown in Panel A of Table 3, the direct effect of *RE* on *RS* (Path 1, δ_1=0.036) is significant and positive. The indirect effect through audit hours (Path 2, γ_1=0.313; Path 3, δ_2=0.092) is 0.029, accounting for 44.4% of the total effect. Both the direct and indirect effects are statistically significant; therefore, the results indicate a partial mediation effect, suggesting that increased audit hours contribute to an increase in restatements following regulatory reinforcement.

As Panel B of Table 3 shows, the direct effect of *RE* on *RS* (Path 1, δ_1 = 0.006) is not statistically significant. However, the indirect impact through audit fees (Path 2, γ_1 = 0.521; Path 3, δ_2 = 0.113) is 0.059, constituting 90.8% of the total effect. The direct impact is insignificant; however, the indirect effect is significant. These results support a complete mediation effect, indicating that higher audit fees fully mediate an increase in restatements.

Panel C of Table 3 Shows that the direct effect of *RE* on *RS* (Path 1, δ_1 = 0.039) is significant. The indirect effect through audit fees per hour (Path 2, γ_1 = 0.018; Path 3, δ_2 = 1.460) is 0.026, accounting for 40.3% of the total effect. These results support a partial mediation effect, indicating that an increase in audit fees per hour following regulatory reinforcement partially explains the increase in restatements.

The results in Table 3 show significant z-statistics for the Sobel test, confirming the validity of the mediation paths. The indices indicate good model fit (RMSEA < 0.05, CFI close to 1, and SRMR < 0.08). These findings suggest that increased audit effort following regulatory reinforcement leads to more frequent restatements.

Table 3. Mediation analysis: Audit effort as a mediating pathway between regulatory reinforcement and financial restatements.

Panel A. Mediation via Audit Hours			
	Coeff.	**z-statistic**	
Direct path			
p (*RE, RS*) = δ1	0.036	3.44	***
Mediated path for *AHOUR*			
p (*RE, AHOUR*) = γ1	0.313	55.59	***
p (*AHOUR, RS*) = δ2	0.092	6.55	***
Total mediated path for *AHOUR* (Indirect Effect = γ1×δ2)	0.029		
The ratio of indirect to total effect (Total Effect = δ1 + γ1×δ2)	0.444		
Sobel (z-statistic)	6.501***		
Control variables	Included		
Industry-fixed effect	Included		
N	12,970		
Goodness-of-fit criteria			
Comparative fit index (CFI)	0.999		
Root Mean square error of approximation (RMSEA)	0.023		
Standardized root mean square residual (SRMR)	0.001		
Panel B. Mediation via Audit Fees			
	Coeff.	z-statistic	
Direct path			
p (*RE, RS*) = δ1	0.006	0.53	
Mediated path for *AFEE*			
p (*RE, AFEE*) = γ1	0.521	68.19	***
p (*AFEE, RS*) = δ2	0.113	10.68	***
Total mediated path for *AFEE* (Indirect effect = γ1×δ2)	0.059		
The ratio of indirect to total effect (Total effect = δ1 + γ1×δ2)	0.908		
Sobel (z-statistic)	10.554***		
Control variables	Included		
Industry-fixed effect	Included		
N	12,970		
Goodness-of-fit criteria			
Comparative fit index (CFI)	0.998		
Root mean square error of approximation (RMSEA)	0.024		
Standardized root mean square residual (SRMR)	0.001		
Panel C. Mediation via Audit Fees per Hour			
	Coeff.	z-statistic	
Direct path			
p (*RE, RS*) = δ1	0.039	3.88	***
Mediated path for *FEE_HOUR*			
p (*RE, FEE_HOUR*) = γ1	0.018	35.21	***
p (*FEE_HOUR, RS*) = δ2	1.460	8.71	***
Total mediated path for *FEE* (Indirect effect = γ1×δ2)	0.026		
The ratio of indirect to total effect (Total effect = δ1 + γ1×δ2)	0.403		
Sobel (z-statistic)	8.452***		
Control variables	Included		
Industry-fixed effect	Included		
N	12,970		
Goodness-of-fit criteria			
Comparative fit index (CFI)	0.991		
Root mean square error of approximation (RMSEA)	0.020		
Standardized root mean square residual (SRMR)	0.001		

Note: *** indicate significance at the 1% level, respectively.

5.2. Results for H2

The results for H1 indicate that greater audit effort drives the increase in restatements following regulatory reinforcement. Restatements resulting from stricter audits may differ from typical restatements in terms of value

relevance. Therefore, the market is expected to interpret them differently. The value relevance of earnings is assessed using the coefficient of *RS*EPS*, whereas that of net assets is examined using *RS*BPS*.

Panel A of Table 4 shows that, consistent with prior studies, the coefficient of *RS*EPS* is significant and negative (-1.820, t = -3.23) before regulatory reinforcement, indicating that the market viewed restatements as a negative signal, with stronger reactions to more severe restatements. However, this negative effect disappeared after regulatory reinforcement (0.556, t = 1.31), suggesting that restatements were no longer perceived negatively. These findings indicate that although pre-regulation restatements signaled financial reporting deficiencies, post-regulation restatements are considered the result of stricter audits, highlighting their differentiated value relevance.

The results in Panel B of Table 4 confirm the robustness of the findings when analyzing the relationship between year-over-year changes in market value and earnings, further validating the results. Specifically, the interaction term between *RS* and *ΔEPS* is significantly negative before regulatory reinforcement (−0.529, t = −2.12) but becomes statistically insignificant and close to zero after the regulatory change (0.056, t = 0.25). This suggests that the previously negative value relevance of restatement severity in relation to earnings diminished following the regulatory reform, indicating a reduced negative signaling effect and further affirming the results in Panel A.

Panel C of Table 4 further examines the effects of regulatory reinforcement by dividing firms into high- and low-audit-hour groups based on the industry-year average and incorporating *RE* as an additional key variable. In the low-audit-hour group, the coefficient of *RS*EPS* is -5.423 (t = -1.86), and that of *RS*EPS*RE* is 5.342 (t = 1.77). In the high-audit-hour group, the coefficient of *RS*EPS* is -1.667 (t = -3.08), and that of *RS*EPS*RE* is 2.457 (t = 3.58). In both groups, the negative sign of *RS*EPS* and the positive sign of *RS*EPS*RE* suggest that the value relevance of restatement severity has improved following regulatory reinforcement. These results are weakly significant in the low-audit-hour group but strongly significant in the high-audit-hour group. Notably, in the high-audit-hour group, the coefficient of *RS*EPS*RE* is substantially larger than that of *RS*EPS*, demonstrating that the positive impact of regulatory reinforcement on the value relevance of restatements is more pronounced in firms with greater audit effort. These findings support this study's hypotheses and highlight the role of audit effort in shaping market perceptions of restatements after regulatory reinforcement.

Table 4. Effect of regulatory reinforcement and audit effort on the value relevance of financial restatements.

Panel A. value relevance of financial restatements before and after regulatory reinforcement						
	Dependent variable: *MV*					
	(1) Before regulatory reinforcement			**(2) After regulatory reinforcement**		
	Coeff.	**t-statistic**		**Coeff.**	**t-statistic**	
RS	0.165	0.23		-0.073	-0.14	
EPS	2.986	4.37	***	2.802	5.92	***
BPS	0.535	8.96	***	0.573	11.75	***
*RS*EPS*	-1.820	-3.23	***	0.556	1.31	
*RS*BPS*	0.019	0.87		-0.021	-0.35	
Constant	5.809	8.77	***	-3.531	-4.93	***
Industry and Year FE	Included			Included		
Std Err Cluster by	Firm			Firm		
N	5,012			7,958		
Adj. R^2	0.5622			0.5403		
Panel B. Change-based analysis: Value relevance of financial restatements before and after regulatory reinforcement						
	Dependent Variable: *ΔMV*					
	(1) Before Regulatory Reinforcement			(2) After Regulatory Reinforcement		
	Coeff.	t-statistic		Coeff.	t-statistic	
RS	0.435	1.14		-0.019	-0.09	
ΔEPS	0.548	3.01	***	0.289	1.80	*
ΔBPS	0.169	1.46		0.247	2.18	**

RS⊿EPS*	-0.529	-2.12	**	0.056	0.25	
RS⊿BPS*	0.012	0.08		-0.151	-0.81	
Constant	-4.528	-18.11	***	-5.168	-18.53	***
Industry and Year FE	Included			Included		
Std Err Cluster by	Firm			Firm		
N	4,874			7,722		
Adj. R^2	0.0527			0.1366		
Panel C. Subsample analysis: Moderating role of audit effort (Audit hours) in the value relevance of financial restatements						
	Dependent Variable: *MV*					
	(1) Low-Audit-Hour			(2) High-Audit-Hour		
	Coeff.	t-statistic		Coeff.	t-statistic	
RS	-3.873	-2.82	***	-0.935	-1.15	
EPS	2.920	2.65	***	2.792	3.95	***
BPS	0.165	1.76	*	0.625	10.38	***
RE	-1.003	-1.31		1.227	1.13	
RS*EPS	-5.423	-1.86	*	-1.667	-3.08	***
RS*BPS	1.245	2.46	**	-0.015	-0.67	
EPS*RE	0.792	0.73		-0.321	-0.43	
BPS*RE	0.111	1.47		-0.026	-0.48	
RS*RE	4.130	2.90	***	0.287	0.27	
RS*EPS*RE	5.342	1.77	*	2.457	3.58	***
RS*BPS*RE	-1.342	-2.65	***	0.053	0.81	
Constant	8.023	7.34	***	1.691	0.25	
Industry and Year FE	Included			Included		
Std Err Cluster by	Firm			Firm		
N	6,521			6,449		
Adj. R^2	0.334			0.591		

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

6. CONCLUSION

Various regulatory measures have been introduced following the revision of South Korea's External Audit Act. This study examines how changes in audit regulations affect audit effort, financial restatements, and the value relevance of earnings. We find that audit effort has increased, and this has mediated the impact of regulatory reinforcement on restatements. The market previously viewed restatements as a negative signal; however, this perception diminished after regulatory changes were implemented. These results suggest that investors' assessments of restatements differ depending on their underlying causes. Thus, this study provides regulatory insights into how the market distinguishes audit-driven corrections from intentional misreporting, which has policy implications for future audit regulations aimed at enhancing accounting transparency without imposing unnecessary burdens.

However, this study has several limitations. First, although Korea provides a unique setting for examining the impact of regulatory changes, it may limit the generalizability of the findings to other countries with different institutional environments. Second, the differentiated value relevance of restatements may be temporary and occur only in the period immediately after regulatory reinforcement (Wilson, 2008). Future research could extend this analysis to other countries with different regulatory settings or use an extended event window to examine long-term persistence.

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Appendix A. Definitions of variables.

Variables	Definitions
Dependent and independent variables	
AHOUR	Natural logarithm of audit hours
AFEE	Natural logarithm of audit fees
FEE_HOUR	Audit fees per hour
RS	A variable that takes the value of 3 if the financial statements for the year were revised, 2 if the previous year's comparative financial statements were restated, 1 if prior period error adjustments were recognized or retained earnings were adjusted, and 0 if there was no financial restatement.
MV	Common stock closing price at the end of March in the following year (in thousands of KRW)
RE	An indicator variable that equals 1 for the post-regulatory reinforcement period (2019–2022) and 0 otherwise.
EPS	Earnings per share (in thousands of KRW)
BPS	Book value per share (in thousands of KRW)
Control variables	
SIZE	Natural logarithm of total assets
LEV	Total liabilities divided by total assets
ROA	Net income divided by total assets at the beginning of the year
GROWTH	Sales growth rate
ASALES	Sales divided by total assets
INVENTORY	Inventory divided by total assets
MB	Market-to-book ratio of equity
FOREIGN	Foreign ownership ratio
LOSS	An indicator variable that equals 1 if the firm reports a net loss and 0 otherwise.
FIRST	An indicator variable that equals 1 if it is the initial audit engagement and 0 otherwise.
BIG	An indicator variable that equals 1 if the auditor is a Big 4 accounting firm (PWC, Deloitte, KPMG, and EY) and 0 otherwise.
OPINION	An indicator variable that equals 1 if the audit opinion is unqualified and 0 otherwise.
CONSOL	Natural logarithm of the number of consolidated subsidiaries
KOSPI	An indicator variable that equals 1 if the company is indexed on the KOSPI, and 0 if it is indexed on the KOSDAQ.

Appendix B. Descriptive statistics.

Variables	N	Mean	Median	Min.	Max.	SD
AHOUR	12,970	7.273	7.129	6.026	9.697	0.713
AFEE	12,970	4.811	4.673	3.258	7.194	0.792
FEE_HOUR	12,970	0.089	0.086	0.034	0.188	0.029
RS	12,970	0.105	0.000	0.000	3.000	0.523
MV	12,970	20.705	7.460	0.491	282.000	40.829
EPS	12,970	0.993	0.193	-5.323	21.500	3.324
BPS	12,970	17.390	5.357	0.171	276.279	39.685
RE	12,970	0.614	1.000	0.000	1.000	0.487
SIZE	12,970	12.221	11.983	9.366	16.640	1.336
LEV	12,970	0.361	0.353	0.027	0.937	0.201
ROA	12,970	0.007	0.024	-0.579	0.371	0.130
GROWTH	12,970	0.105	0.044	-0.702	2.744	0.429
ASALES	12,970	0.711	0.636	0.018	2.496	0.475
INVENTORY	12,970	0.088	0.067	0.000	0.401	0.088
MB	12,970	2.036	1.335	0.000	14.071	2.173
FOREIGN	12,970	0.067	0.030	0.000	0.520	0.098
CONSOL	12,970	1.384	1.386	0.000	4.477	1.021
LOSS	12,970	0.685	1.000	0.000	1.000	0.464
FIRST	12,970	0.268	0.000	0.000	1.000	0.443
BIG	12,970	0.397	0.000	0.000	1.000	0.489
OPINION	12,970	0.993	1.000	0.000	1.000	0.083
KSE	12,970	0.370	0.000	0.000	1.000	0.483