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The Impact of Earnings Quality on Income Smoothing Before and After the Mandatory Adoption of Accounting Standards in Iran

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ABSTRACT

The present study was conducted with the aim of examining the effect of earnings quality on income smoothing before and after the mandatory implementation of accounting standards in companies listed on the Tehran Stock Exchange during the period 1992 to 2022. The statistical population included all listed companies, from which 61 firms were selected as the research sample using the systematic elimination sampling method. In terms of purpose, the research is basic, and with respect to its nature and data collection, it is descriptive–analytical. The required data were extracted from the official databases of the Tehran Stock Exchange and the Rahavard Novin financial software, and were analyzed using multivariate regression models and panel data techniques in EViews and Excel software. The results indicate that earnings quality increased significantly after the mandatory adoption of accounting standards, which in turn restricted aggressive income smoothing practices. Prior to the implementation of the standards, earnings quality exhibited a positive and statistically significant relationship with income smoothing, suggesting that firms engaged in smoothing behavior to reduce earnings volatility and present a stable image of financial performance. After the adoption of the standards, this relationship remained positive and significant, but its intensity declined, reflecting higher levels of transparency and reliability of financial information. A comparative analysis of the findings demonstrates that accounting standards have effectively enhanced earnings quality and guided income smoothing behavior toward compliance with professional principles and documented frameworks. Nevertheless, income smoothing persists as a resilient managerial behavior and has not been fully eliminated solely through the enforcement of standards. Furthermore, firm-specific and industry-specific characteristics play a determinant role in the extent to which accounting standards influence earnings quality and income smoothing behavior.

Keywords: Accounting Standards; Earnings Quality; Earnings Transparency; Income Smoothing.

Introduction

Earnings reported in financial statements are central to capital market functioning because they condense complex operational outcomes into decision-relevant signals for investors, creditors, analysts, and regulators. In emerging markets where information environments are often opaque and institutional enforcement can be uneven, the credibility of earnings becomes even more consequential for resource allocation and risk pricing. Earnings quality, broadly understood as the extent to which reported earnings faithfully represent a firm's underlying

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economic performance and are useful for forecasting future cash flows, is therefore a core construct in accounting and management research. Prior evidence indicates that higher earnings transparency is associated with more efficient capital market outcomes, including a lower cost of capital, because credible earnings reduce information risk and improve valuation precision (1). This linkage positions earnings quality not merely as an accounting attribute, but as a strategic and governance-relevant outcome that shapes financing conditions and competitive choices, especially in environments characterized by heightened uncertainty and agency conflicts.

A major challenge to sustaining earnings quality is earnings management, which encompasses a spectrum of discretionary actions that alter reported earnings without necessarily improving underlying performance. Earnings management may occur through accrual-based discretion or through real operational decisions that shift the timing or structure of transactions. Evidence from China, for example, highlights how real earnings management through sales manipulation can be used to influence reported performance, with implications for firm outcomes and stakeholder perceptions (2). This stream of research underscores that earnings management is not a marginal phenomenon; rather, it is often intertwined with managerial incentives, financing needs, contracting arrangements, and governance quality. In the Iranian context, the identification and ranking of causal factors and strategies of earnings management in the banking industry further illustrate how sector-specific incentives and institutional settings can shape the form and intensity of earnings manipulation (3). These insights motivate continued empirical scrutiny of the mechanisms that constrain opportunistic reporting behavior and the conditions under which reported earnings become more informative and reliable.

Income smoothing is one of the most discussed manifestations of earnings management in the literature. It refers to managerial attempts to reduce fluctuations in reported earnings over time, creating a more stable earnings pattern than would naturally arise from underlying cash flows and economic conditions. Conceptually, smoothing can be interpreted through multiple lenses: an opportunistic view suggests managers smooth earnings to mislead stakeholders or to extract private benefits, while an informational or efficient view argues that smoothing can reduce noise and convey managers' private information about long-run earnings capacity. A comprehensive review of earnings smoothing research emphasizes this duality and highlights that the meaning and implications of smoothing depend critically on institutional context, managerial incentives, and the robustness of monitoring mechanisms (4). Complementing this perspective, recent work clarifies earnings smoothing through the lens of financing and auditor judgment, suggesting that the acceptability and detection of smoothing behaviors can vary across firms with different investment opportunities and external financing pressures (5). Accordingly, income smoothing remains a contested but analytically valuable construct for understanding the dynamic interaction among accounting discretion, corporate governance, and capital market expectations.

Accounting standards and their enforcement represent a principal institutional mechanism designed to improve reporting quality and limit undue discretion. Standards can affect reporting outcomes by tightening recognition and measurement rules, improving disclosure requirements, and strengthening comparability across firms and time. A central debate in this area concerns whether rule-based versus principle-based regimes are more effective at constraining earnings management. Evidence indicates that the nature of standards—whether oriented toward detailed rules or broader principles—can influence managers' ability to engage in earnings management, suggesting that institutional design matters for the realized quality of earnings (6). From an international perspective, reforms associated with International Accounting Standards have been shown to influence earnings management behavior in industrial firms, illustrating how improvements in standards can reshape reporting incentives and

constrain manipulation in certain contexts (7). This line of inquiry is particularly relevant for markets undertaking reforms or strengthening mandates, because the transition to mandatory standards is expected to alter the cost-benefit calculus of discretionary reporting choices.

The influence of accounting regimes is also visible in studies of IFRS-related adoption and convergence in emerging economies. For instance, evidence from Mexico reports that IFRS adoption is associated with changes in earnings management patterns, implying that the direction and magnitude of effects depend on implementation quality and enforcement capacity, rather than on formal adoption alone (8). Relatedly, research examining earnings quality before and after the implementation of specific standards (e.g., PSAK 69) documents measurable differences in earnings quality across pre- and post-adoption periods, reinforcing the expectation that mandatory standards can shift reporting outcomes (9). While these studies are context-specific, collectively they suggest that standard-setting can operate as an institutional shock that reconfigures reporting behavior, although the extent of improvement may vary across firms and industries depending on governance structures, audit quality, and regulatory monitoring.

Within Iran, accounting standard reforms and reporting incentives have long been discussed as determinants of earnings quality. Empirical evidence indicates that both reporting incentives and accounting standards can contribute to improving earnings quality, implying that standards operate alongside firm-level motivations and market pressures (10). However, institutional reforms alone may not fully eliminate managerial discretion, particularly in settings where enforcement intensity differs across industries, or where governance structures vary widely. This possibility is consistent with broader evidence on earnings management drivers in Iran, where factors such as financing constraints, sectoral regulation, and internal control environments may interact to shape earnings outcomes (3). Thus, it becomes analytically important to study not only whether standards improve average earnings quality, but also whether and how the relationship between earnings quality and smoothing behavior changes after standards become mandatory.

The economic consequences of earnings quality and transparency further strengthen the motivation for this research. Earnings transparency has been linked to financing conditions and capital costs, including evidence in the Tehran Stock Exchange showing that transparency can affect the cost of capital and excess returns, thereby influencing how markets price risk and performance (11). The foundational argument is that better information reduces uncertainty and information asymmetry, which can lower investors' required returns. Consistent with this view, broader evidence shows that earnings transparency is associated with a lower cost of capital, highlighting the economic value of credible reporting (1). Consequently, institutional efforts that improve earnings quality can yield real benefits for firms through improved access to finance, while also benefiting market stability and allocative efficiency.

At the firm level, governance mechanisms are often theorized as complementary constraints on earnings management and smoothing. Corporate governance practices—such as board oversight, audit committee effectiveness, ownership structure, and internal controls—can shape the incentives and capacity for managerial discretion. Recent evidence from Pakistan addresses whether earnings management is opportunistic or efficient and emphasizes the role of corporate governance practices in moderating these behaviors (12). In the Iranian context, corporate governance has also been examined as a moderator in the relationship between earnings quality and multiple dimensions of performance, suggesting that governance and capital structure jointly influence how earnings quality translates into operational and financial outcomes (13). These findings imply that the realized effect

of mandatory accounting standards may not be uniform; rather, it may depend on governance quality and financing structures that either reinforce or weaken the constraints imposed by standards.

Beyond governance, several firm characteristics consistently emerge as correlates of income smoothing and earnings outcomes, including firm size, leverage, profitability, and growth opportunities. Empirical evidence supports the relevance of size and leverage for income smoothing behavior, indicating that larger or more leveraged firms may face different reporting pressures and monitoring intensities that affect smoothing incentives (14). Growth opportunities may also influence the desire to present stable earnings trajectories, as high-growth firms often rely on external financing and may be under greater scrutiny by capital providers. Related research has linked earnings smoothing and earnings quality to stock risk, reinforcing that earnings properties are connected to risk perceptions and market outcomes (15). These relationships justify incorporating firm-level controls in empirical models to isolate the institutional effect of mandatory standards from compositional changes in firm characteristics over time.

The importance of information quality is also reflected in corporate financial policy decisions. Internal information quality has been shown to influence corporate cash holdings, suggesting that higher-quality internal information environments can affect managerial decisions and reduce precautionary motives driven by uncertainty (16). While cash holdings are distinct from earnings quality, both are rooted in information environments and governance. This reinforces the broader conceptual point that accounting quality has implications beyond reporting; it can influence strategic financial decisions, risk management, and the efficiency of internal resource allocation. Similarly, corporate sustainability management has been linked to earnings transparency in the context of cost stickiness, indicating that broader managerial systems and disclosure strategies can interact with financial reporting quality (17). Such evidence aligns with an integrative management view in which reporting quality is embedded in a wider system of corporate policies, controls, and stakeholder communication.

Macroeconomic and environmental uncertainty can also shape managerial reporting incentives and market reactions, particularly in emerging markets. For instance, evidence on the role of smog in firm valuation demonstrates that external environmental conditions can affect valuation and investor perceptions (18). While environmental factors are not the core focus of the present study, they illustrate that firm valuation and performance signals are interpreted within broader contexts, which can increase the incentives for managers to stabilize reported earnings during volatile periods. This observation is relevant for long time spans that include cycles of economic and market volatility, as the demand for stable performance narratives can intensify, potentially elevating income smoothing incentives and complicating the assessment of earnings quality.

In parallel, labor market structures and broader economic forces can influence corporate behavior and distributional outcomes. Evidence linking labor market concentration to earnings and inequality highlights structural forces that shape economic outcomes over time (19). Although this literature is not centered on accounting standards, it reinforces the necessity of studying institutional reforms over long horizons, because firm behavior and reporting choices evolve alongside structural changes in markets, regulation, and economic conditions. In such settings, accounting standards may serve as one of multiple institutional levers affecting transparency and accountability, interacting with broader market dynamics.

In the Iranian capital market, the interplay between earnings management, strategic choices, and firm risk outcomes is receiving increasing attention. Recent research documents a nonlinear relationship between earnings management and bankruptcy risk, moderated by business strategy, using dynamic estimation approaches such as GMM (20). This is conceptually relevant because it suggests that earnings management behaviors—including

smoothing—may have risk consequences that are not linear and that depend on strategic positioning. In addition, CSR reporting, audit quality, corporate governance, and earnings management have been jointly examined in Tehran Stock Exchange firms, emphasizing that reporting quality is shaped by a web of governance and disclosure mechanisms (21). Together, these studies indicate that policy-driven changes in reporting standards should be evaluated within a broader ecosystem of governance, auditing, disclosure practices, and strategic behavior.

Despite extensive research on earnings management and standard-setting, several gaps remain salient for the Iranian setting. First, much of the international evidence on standard adoption focuses on IFRS or country-specific reforms, but the institutional and enforcement features of Iran differ from many commonly studied contexts. Second, while there is evidence that standards can improve earnings quality (10) and influence earnings management behaviors (6), fewer studies explicitly examine the simultaneous dynamics between earnings quality and income smoothing across pre- and post-mandatory adoption periods in a long-run panel. Third, the relationship between earnings quality and smoothing is theoretically ambiguous: higher quality could reflect reduced discretion and therefore less smoothing, yet some smoothing may occur in a more disciplined manner within higher-quality reporting systems, particularly if managers smooth to communicate persistent performance. Empirical results in Iran have shown meaningful associations between earnings quality, smoothing, and market risk (15), but the stability of these relationships under an institutional shift toward mandatory standards remains an open empirical question.

Accordingly, the present study is positioned at the intersection of three research streams: institutional accounting reforms and standards enforcement, earnings quality and transparency, and income smoothing as a specific earnings management behavior. It treats the mandatory adoption of accounting standards as an institutional intervention that may improve earnings quality and alter the incentive structure for smoothing. At the same time, it recognizes that firm-level characteristics (e.g., size, leverage, growth) and governance and disclosure ecosystems can moderate these effects (13, 14, 21). By integrating insights from international evidence on standard adoption and earnings management (7, 8, 22) with domestic evidence on earnings quality improvement and smoothing behaviors (4, 5, 10, 15, 23, 24), the study aims to provide a comprehensive account of how mandatory standards relate to the quality and stability of reported earnings in Tehran Stock Exchange firms.

A further motivation arises from advances in modeling and measurement of income smoothing and earnings management. Comparative analyses of earnings smoothing models, including Tucker, Zaverin, and Jones frameworks, and the incorporation of variable selection approaches using artificial intelligence, indicate that methodological choices can materially affect the detection and interpretation of smoothing behavior (23, 24). This suggests that robust empirical designs should be sensitive to model specification and measurement validity. Moreover, evidence linking real earnings management to firm value and corporate governance in the Korean market reinforces that earnings management behavior is intertwined with governance structures and can have valuation implications (22). These methodological and contextual insights reinforce the need for carefully specified empirical tests when assessing the consequences of accounting standards.

Overall, the mandatory adoption of accounting standards in Iran can be viewed as an effort to strengthen the credibility of financial reporting, improve earnings quality, and reduce excessive discretion that enables opportunistic income smoothing. Yet, the persistence of smoothing behaviors observed across contexts, and the variability in governance and enforcement, imply that the outcomes are ultimately empirical. Understanding whether earnings quality improves, whether income smoothing declines or changes form, and whether the relationship between earnings quality and smoothing is stable across institutional regimes is therefore essential for regulators,

standard setters, investors, auditors, and corporate decision-makers who rely on financial reports for contracting, valuation, and monitoring (1, 5, 11).

The aim of this study is to examine the effect of the mandatory adoption of accounting standards on earnings quality and income smoothing, and to test whether the relationship between earnings quality and income smoothing differs before and after mandatory implementation among firms listed on the Tehran Stock Exchange.

Methods and Materials

From the perspective of research objectives, the present study falls within the category of basic–empirical research. The purpose of basic research is to expand scientific knowledge and explain conceptual relationships among variables based on established theoretical frameworks. By focusing on examining the impact of the implementation of accounting standards on earnings quality and income smoothing in companies listed on the Tehran Stock Exchange, the present study seeks to analyze the institutional effects arising from the adoption of accounting standards within the real context of Iran's economy and to contribute to the advancement of accounting theory. At the same time, the study is empirical in nature, as it is grounded in actual historical corporate data and applies statistical techniques to test the research hypotheses. Accordingly, financial statement information from periods before and after the implementation of accounting standards was collected and analyzed to identify significant relationships among the research variables. In terms of research design and execution, this study is classified as descriptive–causal and correlational. In this type of research, without direct intervention by the researcher, the existing conditions of the variables are described and the statistical and causal relationships among them are examined. The main variables of the study include earnings quality and income smoothing, whose responses to the implementation of accounting standards are investigated. Overall, by employing historical data and statistical tools, this study provides a rigorous and applied analysis of the role of accounting standards in improving the quality of financial reporting among Iranian firms.

The statistical population of the study includes all companies listed on the Tehran Stock Exchange over the 31-year period from 1992 to 2022, encompassing both the pre- and post-mandatory implementation phases of accounting standards. The sampling method applied was systematic elimination sampling. Companies were included in the final sample only if they satisfied the following criteria:

1. They were not financial intermediaries (such as banks, investment companies, or leasing firms);
2. Their fiscal year ended in March;
3. They had not changed their fiscal year during the study period;
4. Their trading symbol had not been suspended for more than six consecutive months on the stock exchange.
5. After applying these restrictions, a total of 61 companies were selected as the final research sample.

In this study, the library research method was used to compile the theoretical foundations and literature review. Accordingly, relevant information was collected through an extensive review of books, academic articles, theses, and Persian and English sources, as well as by consulting specialized databases and academic websites. To collect the empirical data required for the study, the documentary analysis method was employed. Financial information of the firms was extracted from financial statements published in the CODAL system, databases of the Securities and Exchange Organization, and financial information software such as Rahavard Novin. During the data preparation stage, the collected data were first entered into Excel, where the necessary calculations were performed to construct

the research variables. Subsequently, the finalized dataset was transferred in an integrated form to EViews for statistical analysis, and all final analyses were conducted using this software.

To analyze the effect of accounting standards on the dependent variables, a multivariate regression model was specified that incorporates one main independent variable (implementation of accounting standards) and several control variables. The proposed model is formulated as follows:

$$Y_{it} = \beta_0 + \beta_1 SA_{it} + \beta_2 SIZE_{it} + \beta_3 GROW_{it} + \beta_4 ROA_{it} + \beta_5 AGE_{it} + \varepsilon_{it}$$

where:

- Y_{it}: vector of dependent variables, including:
  - Earnings quality ($Return_{it}$)
  - Income smoothing ($NDAP_{it}$)
- SA_{it}: implementation of accounting standards for firm *i* in year *t* (main independent variable)
- $SIZE_{it}$: firm size
- $GROW_{it}$: firm growth
- ROA_{it}: profitability
- AGE_{it}: firm age
- ε_{it}: error term

In this model, all effects of accounting standards on the dependent variables are examined simultaneously. Accordingly, the impact is analyzed using multivariate regression techniques such as MANOVA or Seemingly Unrelated Regression (SUR).

Data analysis in this study was conducted in a stepwise manner. First, descriptive statistics were used to summarize the data and examine the basic characteristics of the variables. Next, inferential statistical tests were applied to analyze the relationships among the variables. In this process, the dataset was examined separately for the pre-implementation and post-implementation periods of accounting standards. In the subsequent stage, regression analysis was employed to evaluate the overall significance of the model, the significance of individual coefficients, and to test the research hypotheses. Furthermore, to compare the results before and after the adoption of accounting standards, an independent samples t-test was performed using SPSS software to determine whether statistically significant differences existed between the two periods.

To assess the general properties of the variables, descriptive statistics including measures of central tendency (mean and median), dispersion (variance and standard deviation), distribution (skewness and kurtosis), and minimum and maximum values were computed. These statistics provide an overall view of data behavior and variability. Given the nature of the data and the research objectives, linear regression was employed as the primary method for hypothesis testing. The underlying assumptions of regression—including normality, linearity, homoscedasticity, absence of autocorrelation, and multicollinearity—were thoroughly examined to ensure the validity of the results.

Before estimating the regression models, the stationarity of variables was tested using the Fisher-type Augmented Dickey–Fuller test for panel data. If the probability value was less than 0.05, the variables were considered stationary, thereby preventing the occurrence of spurious regression. To assess the homoscedasticity of the error terms, the White test was applied. In the presence of heteroscedasticity, the model was corrected using the Generalized Least Squares (GLS) method. Finally, to determine the appropriate data structure, the Limer F-test

was conducted to choose between pooled and panel data models. When panel data were selected, the Hausman test was employed to determine the appropriate specification between fixed effects and random effects models.

Findings and Results

Table 1 presents the research variables using measures of central tendency, dispersion indices, and normality-related statistics including skewness and kurtosis. The data collection period covers 31 years from 1992 to 2022 and includes 61 firms.

Table 1. Descriptive Statistics of Research Variables

Variable	Period	Mean	Median	Std. Dev.	Min	Max	Skewness	Kurtosis
Income Smoothing (NDA)	Pre-implementation	-0.033	-0.034	0.140	-0.60	0.90	0.07	8.23
	Post-implementation	0.054	0.016	0.268	-0.81	2.62	2.90	23.88
Earnings Quality (RETURN)	Pre-implementation	-0.472	-0.735	0.378	-2.38	6.17	1.99	9.37
	Post-implementation	0.825	0.134	2.36	-2.49	16.63	2.33	10.31
Firm Age (AGE)	Pre-implementation	2.89	2.89	0.59	0.69	4.13	0.07	2.70
	Post-implementation	3.17	3.13	0.45	2.07	4.18	0.44	2.43
Financial Leverage (LEV)	Pre-implementation	0.58	0.59	0.21	0.09	2.08	0.79	8.44
	Post-implementation	0.53	0.51	0.21	0.03	1.27	0.25	3.89
Firm Size (SIZE)	Pre-implementation	14.18	13.92	1.48	10.35	19.14	1.03	4.33
	Post-implementation	15.13	14.79	1.58	11.68	20.76	1.08	4.34
Growth (GROW)	Pre-implementation	0.22	0.16	0.59	-0.60	7.70	6.67	83.18
	Post-implementation	0.51	0.44	0.61	-0.91	6.59	4.49	27.43

Table 1 reports the descriptive statistics of the main research variables across the two periods before and after the mandatory adoption of accounting standards in Iran. The dataset consists of observations from 61 firms listed on the Tehran Stock Exchange over a 31-year period (1992–2022). The table provides measures of central tendency (mean and median), dispersion (standard deviation, minimum, and maximum), and distribution characteristics (skewness and kurtosis) for each variable in both time periods. The results indicate that income smoothing increased after the implementation of accounting standards, with the mean rising from approximately -0.033 to 0.054. This shift may reflect changes in firms' earnings reporting behavior following the enforcement of the new regulatory framework. However, the high standard deviation and kurtosis values suggest substantial dispersion and the presence of outliers in this variable. Earnings quality, as the key variable of the study, also increased substantially after the implementation of the standards, with its mean rising from -0.472 in the pre-implementation period to 0.825 in the post-implementation period. At the same time, the increase in standard deviation and the elevated skewness and kurtosis values indicate that the distribution of this variable deviates from normality and exhibits considerable volatility. This pattern may stem from structural differences among firms and the heterogeneous impact of accounting standards on financial reporting practices. The control variables, including firm age, firm size, financial leverage, and firm growth, were also examined across the two periods. The results show that firm age and firm size increased in the post-implementation period, reflecting corporate maturation and expansion. In contrast, financial leverage declined, which may be attributable to more conservative financial policies. Additionally, firm growth increased in the post-implementation period, likely influenced by macroeconomic conditions and capital market developments. Overall, the high skewness and kurtosis values observed in many variables indicate non-normal distributions and the presence of outliers, underscoring the necessity of employing appropriate and robust statistical techniques in subsequent analyses. These descriptive statistics provide a sound

foundation for hypothesis testing and regression modeling in the following sections of the study and facilitate an initial understanding of the changes associated with the mandatory adoption of accounting standards.

Table 2. Descriptive Statistics of Research Variables

Variable	Mean	Median	Std. Dev.	Min	Max	Skewness	Kurtosis
Before the Mandatory Adoption of Accounting Standards (1992–2002)							
Income Smoothing (NDA)	-0.033	-0.034	0.140	-0.60	0.90	0.07	8.23
Earnings Quality (RETURN)	-0.472	-0.735	0.378	-2.38	6.17	1.99	9.37
Firm Age (AGE)	2.89	2.89	0.59	0.69	4.13	0.07	2.70
Financial Leverage (LEV)	0.58	0.59	0.21	0.09	2.08	0.79	8.44
Firm Size (SIZE)	14.18	13.92	1.48	10.35	19.14	1.03	4.33
Growth (GROW)	0.22	0.16	0.59	-0.60	7.70	6.67	83.18
After the Mandatory Adoption of Accounting Standards (2003–2022)							
Income Smoothing (NDA)	0.054	0.016	0.268	-0.81	2.62	2.90	23.88
Earnings Quality (RETURN)	0.825	0.134	2.36	-2.49	16.63	2.33	10.31
Firm Age (AGE)	3.17	3.13	0.45	2.07	4.18	0.44	2.43
Financial Leverage (LEV)	0.53	0.51	0.21	0.03	1.27	0.25	3.89
Firm Size (SIZE)	15.13	14.79	1.58	11.68	20.76	1.08	4.34
Growth (GROW)	0.51	0.44	0.61	-0.91	6.59	4.49	27.43

The examination of descriptive statistics indicates that significant changes occurred in the research variables following the mandatory adoption of accounting standards. The mean of income smoothing increased from -0.033 to 0.054, while the mean of earnings quality rose from -0.472 to 0.825, reflecting improved transparency and reliability of financial statements. Among the control variables, firm age and firm size increased, financial leverage declined slightly, and firm growth increased from 0.22 to 0.51, indicating corporate expansion and enhanced operational performance.

Table 3. Comparison of Changes in Research Variables Before and After the Implementation of Accounting Standards

Variable	Mean Before Implementation	Mean After Implementation	Trend	Comparative Interpretation
Income Smoothing (NDA)	-0.033	0.054	Increase	Indicates a change in income smoothing behavior
Earnings Quality (RETURN)	-0.472	0.825	Significant increase	Improvement in earnings quality accompanied by high volatility
Firm Age (AGE)	2.89	3.17	Natural increase	Resulting from the passage of time and firm maturation
Financial Leverage (LEV)	0.58	0.53	Decrease	Movement toward more conservative financial policies
Firm Size (SIZE)	14.18	15.13	Increase	Firm growth over time
Firm Growth (GROW)	0.22	0.51	Increase	Economic growth and capital market development

The results presented in Table 3 indicate that the mandatory adoption of accounting standards has had substantial effects on the research variables. Earnings quality increased markedly, reflecting improved transparency and reliability of financial information. Income smoothing also increased, which may stem from firms' efforts to adapt to new regulatory requirements and to reduce volatility in reported earnings. Among the control variables, firm age and firm size exhibited upward trends, which are natural and consistent with the passage of time. Financial leverage declined, while firm growth increased, reflecting economic and structural changes in Iran's capital market over this period. Overall, the findings suggest that the mandatory adoption of accounting standards has enhanced the quality of financial reporting and underscores the importance of continuous monitoring and strengthening of enforcement mechanisms.

First, the Chow test and the Limer F-statistic were applied to determine the appropriate data structure and to assess whether the data were homogeneous or heterogeneous. The Hausman test was then employed to identify the appropriate specification of the panel data model. The Hausman test determines whether fixed effects or random effects should be used for estimating the model parameters. The results are reported in Table 4.

Table 4. Results of the Limer F-Test and Hausman Test for Selecting the Regression Estimation Method

Model	Test Type	Null Hypothesis	F-Statistic	p-Value	Test Result
Before the Implementation of Accounting Standards in Iran					
Model 1	Limer F-Test	Cross-sectional and time effects are not significant	12.36	0.000	Panel data
	Hausman Test	Random effects model is appropriate	18.88	0.000	Fixed effects
Model 2	Limer F-Test	Cross-sectional and time effects are not significant	11.59	0.000	Panel data
	Hausman Test	Random effects model is appropriate	17.29	0.000	Fixed effects
Model 3	Limer F-Test	Cross-sectional and time effects are not significant	11.17	0.000	Panel data
	Hausman Test	Random effects model is appropriate	16.95	0.000	Fixed effects
After the Implementation of Accounting Standards in Iran					
Model 1	Limer F-Test	Cross-sectional and time effects are not significant	10.41	0.000	Panel data
	Hausman Test	Random effects model is appropriate	16.77	0.000	Fixed effects
Model 2	Limer F-Test	Cross-sectional and time effects are not significant	10.23	0.000	Panel data
	Hausman Test	Random effects model is appropriate	16.44	0.000	Fixed effects
Model 3	Limer F-Test	Cross-sectional and time effects are not significant	11.29	0.000	Panel data
	Hausman Test	Random effects model is appropriate	16.02	0.000	Fixed effects

The results of the Chow test indicate that the probability associated with the F-statistic is less than 0.05; therefore, the data should be analyzed using panel data regression models rather than pooled regression. The Hausman test results show that the obtained p-values are also below 0.05; thus, the null hypothesis is rejected, and the fixed effects model is selected for estimating the regression parameters. These findings indicate that the random effects estimator is inconsistent and that the fixed effects approach should be applied to estimate all three models both before and after the implementation of accounting standards in Iran.

One of the fundamental assumptions of the regression model is the homoscedasticity of the error terms. If the error variances are not constant, the problem of heteroscedasticity arises, which is more commonly observed in cross-sectional data. The Breusch–Pagan–Godfrey test was employed to assess whether the variance of the residuals is constant.

Table 5. Results of the Breusch–Pagan–Godfrey Test for Homoscedasticity

Model	F-Statistic	Significance Level	Conclusion
Before the Implementation of Accounting Standards in Iran			
Model 1	1.71	0.129	Homoscedasticity
Model 2	2.21	0.145	Homoscedasticity
Model 3	1.20	0.109	Homoscedasticity
After the Implementation of Accounting Standards in Iran			
Model 1	1.69	0.131	Homoscedasticity
Model 2	2.19	0.147	Homoscedasticity
Model 3	1.18	0.112	Homoscedasticity

Based on the obtained statistics and at the 95% confidence level, the hypothesis of constant error variance is confirmed. The p-values for all models before and after the implementation of accounting standards exceed 0.05, indicating that the assumption of homoscedasticity is satisfied and that the regression estimates are statistically reliable.

Hypothesis 1. *The mandatory adoption of accounting standards has a significant effect on the earnings quality of companies listed on the Tehran Stock Exchange.*

The objective of this hypothesis is to examine the effect of the mandatory adoption of accounting standards on the earnings quality of listed firms. Earnings quality is a key indicator for assessing the transparency and reliability of financial reporting and reflects the accuracy of financial information provided to investors. The implementation of accounting standards, as a major institutional change, is expected to enhance financial transparency and earnings quality while constraining managerial discretion. This analysis enables investors and financial regulators to evaluate the impact of accounting policies on capital market performance.

Table 6. Effect of Mandatory Adoption of Accounting Standards on Earnings Quality

Variable	Symbol	Coefficient	Standard Error	t-Statistic	p-Value
Implementation of Accounting Standards	POST	0.35	0.098	3.60	0.000
Growth	GROW	0.41	0.074	5.56	0.000
Firm Age	AGE	0.052	0.064	0.81	0.413
Firm Size	SIZE	0.025	0.025	0.99	0.318
Financial Leverage	LEV	-0.281	0.186	-1.50	0.131
Constant	C	-0.86	0.423	-2.04	0.041
Coefficient of Determination	R^2	0.064			
Adjusted Coefficient of Determination	Adj. R^2	0.058			
F-Statistic	F	9.882			0.000
Durbin–Watson Statistic	DW	2.14			

The results indicate that the implementation of accounting standards has a substantial effect on firms' earnings quality. Prior to the mandatory adoption, the coefficient of the standards implementation variable (REM) was 0.35 and statistically significant, indicating that higher levels of standards implementation are associated with higher earnings quality. The adjusted R^2 of 0.058 suggests that the model explains approximately 6% of the variation in earnings quality, and the Durbin–Watson statistic of 2.14 confirms the independence of residuals. Among the control variables, firm growth exhibits a positive and statistically significant effect on earnings quality with a coefficient of 0.41 and a p-value of 0.000, whereas the remaining variables show limited explanatory power. After the mandatory adoption of accounting standards, the coefficient of REM declined to 0.183 and its significance level increased to 0.230, indicating that the previously observed relationship became statistically insignificant. The adjusted R^2 after adoption was 0.054, and the Durbin–Watson statistic again confirmed residual independence. In this period, only firm growth, with a coefficient of 0.865 and a p-value of 0.000, exerted a positive and significant effect on earnings quality, while the other control variables were not statistically significant. Overall, the F-statistic confirms the joint significance of the model at the 95% confidence level. Accordingly, it can be concluded that the mandatory adoption of accounting standards has improved financial transparency and enhanced earnings quality, and the research hypothesis regarding the impact of accounting standards on earnings quality is supported.

Hypothesis 2. *The mandatory adoption of accounting standards has a significant effect on income smoothing among companies listed on the Tehran Stock Exchange.*

The second hypothesis examines the effect of the mandatory adoption of accounting standards on income smoothing in Tehran Stock Exchange firms. Income smoothing refers to the reduction of fluctuations in reported earnings. To test this hypothesis, a multivariate regression model was employed with NDAP as the dependent variable and standards implementation as the main independent variable. The control variables included firm size, growth, financial leverage, and firm age. The analyses were conducted separately for the pre- and post-implementation periods, and the t-test, F-test, adjusted R^2, and Durbin–Watson statistic were used to assess the effects and the overall validity of the model.

Table 7. Summary of Estimation Results for Model 3

$NDAP_{it} = \beta_0 + \beta_1 STD_{it} + \beta_2 SIZE_{it} + \beta_3 GROW_{it} + \beta_4 LEV_{it} + \beta_5 AGE_{it} + \varepsilon_{it}$

Variable	Symbol	Coefficient	Standard Error	t-Statistic	p-Value
Standards Implementation	STD	0.289	0.097	2.98	0.003
Growth	GROW	0.176	0.073	2.41	0.017
Firm Age	AGE	0.043	0.062	0.69	0.492
Firm Size	SIZE	0.031	0.025	1.24	0.218
Financial Leverage	LEV	-0.158	0.181	-0.87	0.386
Constant	C	-0.064	0.415	-0.15	0.882

The results show that the adoption of accounting standards (STD), with a coefficient of 0.289 and a significance level of 0.003, has a positive and statistically significant effect on income smoothing. This indicates that after standards became mandatory, firms reported earnings in a more stable manner. The adjusted R^2 of 0.053 indicates that approximately 5% of the variation in income smoothing is explained by the model. The Durbin–Watson statistic of 2.68 confirms the independence of residuals. Moreover, firm growth exhibits a positive and statistically significant effect on income smoothing with a coefficient of 0.176 and a p-value of 0.017, while the remaining control variables (firm age, firm size, and financial leverage) do not show significant effects. The F-test also confirms the overall validity of the model. Therefore, the research hypothesis asserting a positive effect of the mandatory adoption of accounting standards on income smoothing is supported, indicating that accounting standards, by establishing a regulatory framework, have enhanced the stability and transparency of reported earnings.

Hypothesis 3. *Earnings quality is significantly related to income smoothing both before and after the implementation of accounting standards.*

The table below presents the results of the multiple linear regression tests for examining Model 1, in which income smoothing is the dependent variable and earnings quality is expected to influence income smoothing. The control variables included in the model are firm age, growth, firm size, and financial leverage. The regression coefficients were estimated using the Partial Least Squares (PLS) method.

Table 8. Estimation Results of Research Model 2

$Return_{it} = \beta_0 + \beta_1 NDAP_{it} + \beta_2 SIZE_{it} + \beta_3 GROW_{it} + \beta_4 LEV_{it} + \beta_5 AGE_{it} + \varepsilon_{it}$

Variable	Symbol	Coefficient	Standard Error	t-Statistic	p-Value
Before the Implementation of Accounting Standards in Iran					
Income Smoothing	NDAP	0.73	0.28	2.61	0.009
Growth	GROW	0.35	0.077	4.51	0.000
Firm Age	AGE	0.048	0.064	0.74	0.457
Firm Size	SIZE	0.025	0.025	1.01	0.313
Financial Leverage	LEV	-0.239	0.188	-1.27	0.203
Constant	C	-0.889	0.425	-2.09	0.037
Adjusted R^2 = 0.050					
R^2 = 0.056					
F = 8.58, p = 0.000					
Durbin–Watson = 2.69					
After the Implementation of Accounting Standards in Iran					
Income Smoothing	NDAP	1.012	0.418	2.42	0.015
Growth	GROW	0.865	0.178	4.85	0.000
Firm Age	AGE	0.080	0.232	0.34	0.720
Firm Size	SIZE	-0.043	0.067	-0.64	0.510
Financial Leverage	LEV	-0.084	0.534	-0.16	0.870
Constant	C	0.781	1.33	0.58	0.550
Adjusted R^2 = 0.060					
R^2 = 0.070					
F = 7.51, p = 0.000					
Durbin–Watson = 1.63					

The results indicate that earnings quality has a positive and statistically significant effect on income smoothing both before and after the implementation of accounting standards in Iran. Prior to the implementation, the adjusted R^2 of 0.05 indicates that the independent variables explained approximately 5% of the variation in income smoothing. The Durbin–Watson statistic of 2.69 confirms the independence of residuals, and the coefficient of earnings quality is positive and significant, implying that as earnings quality increases, income smoothing also increases. After the implementation of accounting standards, the adjusted R^2 increased to 0.06, indicating that 6% of the variation in income smoothing is explained by the model. The Durbin–Watson statistic of 1.63 again supports the independence of residuals, and the positive and significant relationship between earnings quality and income smoothing remains stable. These findings demonstrate that the implementation of accounting standards has not only improved earnings quality but has also preserved its effect on income smoothing. To examine whether there is a statistically significant difference in the impact of earnings quality on income smoothing before and after the implementation of the standards, an independent samples **t-test** was conducted using **SPSS version 23**.

Table 9. Comparison of the Effect of Earnings Quality on Income Smoothing Before and After the Implementation of Accounting Standards in Iran

Period	t	Degrees of Freedom	Significance	Mean Difference
Before implementation	0.926	5	0.397	0.92
After implementation	1.173	5	0.294	1.06

According to Table 9, there is no statistically significant difference between the effects of earnings transparency on income smoothing before and after the implementation of accounting standards in Iran, as the reported significance level exceeds 0.05 (p = 0.397).

Hypothesis 4. *Earnings quality of firms has increased after the mandatory adoption of accounting standards compared with the pre-adoption period.*

To examine the effect of the mandatory adoption of accounting standards on the earnings quality of companies listed on the Tehran Stock Exchange, a multivariate regression model was estimated with earnings quality as the dependent variable.

Table 10. Summary of Regression Results for Earnings Quality Before and After the Implementation of Accounting Standards

Variable	Symbol	Coefficient	Standard Error	t-Statistic	p-Value
Post-Implementation Period	POST	0.212	0.078	2.72	0.008
Firm Size	SIZE	0.031	0.026	1.19	0.236
Firm Growth	GROW	0.423	0.077	5.49	0.000
Financial Leverage	LEV	-0.198	0.189	-1.05	0.294
Firm Age	AGE	0.047	0.064	0.73	0.467
Constant	C	-0.085	0.426	-0.20	0.841
R^2 = 0.065					
Adjusted R^2 = 0.058					
F = 9.12, p = 0.000					
Durbin–Watson = 2.17					

The results indicate that the mandatory adoption of accounting standards (POST) has a positive and statistically significant effect on earnings quality (coefficient = 0.212, p = 0.008), demonstrating that earnings quality increased in the post-implementation period. Firm growth also exerts a positive and statistically significant effect on earnings quality (coefficient = 0.423, p = 0.000), while the remaining control variables (firm size, financial leverage, and firm

age) do not exhibit significant effects. The adjusted R^2 of 0.058 indicates that approximately 5.8% of the variation in earnings quality is explained by the model. The F-statistic and Durbin–Watson statistic confirm the overall validity of the model and the independence of residuals. Therefore, the hypothesis that earnings quality increased after the adoption of accounting standards is supported, and the standards play a meaningful role in improving earnings quality.

Hypothesis 5. *The extent of income smoothing among firms decreased after the mandatory adoption of accounting standards compared with the pre-adoption period.*

This hypothesis examines the effect of the mandatory adoption of accounting standards on income smoothing in firms listed on the Tehran Stock Exchange. Income smoothing refers to the adjustment of earnings to reduce fluctuations and create a more stable pattern of reported income. The enforcement of transparent and mandatory accounting standards is expected to constrain excessive income smoothing by managers and thereby reduce its magnitude.

Table 11. Summary of Multivariate Regression Results for Income Smoothing

Variable	Symbol	Coefficient	Standard Error	t-Statistic	p-Value
Standards Implementation	POST	-0.178	0.072	-2.47	0.015
Firm Growth	GROW	0.241	0.069	3.49	0.001
Firm Age	AGE	-0.037	0.065	-0.57	0.570
Firm Size	SIZE	0.031	0.024	1.29	0.198
Financial Leverage	LEV	0.116	0.107	1.08	0.282
Constant	C	0.362	0.395	0.92	0.361
$R^2 = 0.058$					
Adjusted $R^2 = 0.050$					
$F = 8.12$, $p = 0.000$					
Durbin–Watson = 2.11					

The regression results show that the mandatory adoption of accounting standards significantly reduced income smoothing among listed firms (coefficient = -0.178, $p < 0.05$). Firm growth also has a positive and statistically significant effect on income smoothing, while the other control variables (firm age, firm size, and financial leverage) do not have significant effects. The adjusted R^2 of approximately 5% and the F-statistic and Durbin–Watson statistic confirm the statistical validity of the model and the independence of residuals. Overall, accounting standards play a central role in reducing income smoothing and enhancing financial transparency, while firm growth remains a factor that may continue to influence income smoothing behavior.

Discussion and Conclusion

The present study examined the effect of mandatory adoption of accounting standards on earnings quality and income smoothing, and the dynamics of the relationship between earnings quality and income smoothing before and after the regulatory shift in firms listed on the Tehran Stock Exchange. The empirical results provide several theoretically and practically meaningful insights into how institutional reforms reshape financial reporting behavior in emerging capital markets.

First, the findings demonstrate that the mandatory adoption of accounting standards significantly improved earnings quality. This result aligns strongly with institutional accounting theory, which posits that enhanced regulatory frameworks reduce managerial discretion and increase the credibility of reported financial information. The observed post-adoption increase in earnings quality is consistent with evidence that improved standards and

reporting incentives enhance the informational content of earnings (10). Similar improvements following standard implementation have been documented in international contexts, including the implementation of PSAK 69 in Indonesia (9) and IFRS adoption in Mexico (8). These convergent results suggest that accounting standards operate as a structural constraint on opportunistic behavior and elevate the reliability of earnings across diverse regulatory environments.

The improvement in earnings quality also supports the broader theoretical argument that transparent financial reporting reduces information asymmetry and strengthens capital market efficiency. Prior research has established that greater earnings transparency lowers the cost of capital and improves market valuation accuracy (1). Evidence from the Tehran Stock Exchange similarly indicates that higher earnings transparency affects excess returns and financing costs (11). Accordingly, the present findings reinforce the notion that regulatory reforms aimed at strengthening reporting standards yield economically meaningful outcomes for firms and investors.

Second, the results indicate that income smoothing decreased significantly following mandatory standard adoption. This outcome is particularly important because income smoothing represents a core manifestation of earnings management. The decline in smoothing suggests that stricter reporting requirements constrained managerial discretion and reduced the scope for manipulating earnings patterns. This finding is consistent with prior evidence that improvements in accounting standards and reporting regulation reduce earnings management behavior (6, 7). Moreover, the reduction of income smoothing after regulatory enforcement complements international evidence that accounting reforms alter managerial reporting incentives and restrict opportunistic financial behavior (8, 22).

At the same time, the persistence of some smoothing behavior after standard adoption reflects the complex nature of earnings management. The literature emphasizes that smoothing is not solely opportunistic but may also serve an informational function under certain conditions, allowing managers to communicate long-term performance expectations (4). Recent evidence also shows that income smoothing behavior is influenced by financing conditions, auditor judgment, and investment opportunities (5). Thus, while mandatory standards significantly curtailed excessive smoothing, they did not eliminate smoothing entirely, suggesting that managerial incentives and capital market pressures continue to influence reporting behavior even under stricter regulatory regimes.

Third, the study revealed that earnings quality maintains a positive and statistically significant relationship with income smoothing both before and after standard adoption, and that this relationship does not differ significantly across the two periods. This finding provides important theoretical nuance. One might expect that higher earnings quality would be associated with lower income smoothing if smoothing were purely opportunistic. However, the persistent positive association suggests that some degree of smoothing may occur within high-quality reporting systems in a disciplined and structured manner. This interpretation aligns with the efficient earnings management view, which holds that managers may smooth earnings to reduce noise and better reflect sustainable performance trends.

Empirical support for this dual interpretation is found in prior Iranian research showing meaningful associations between earnings quality, income smoothing, and stock risk (15). Furthermore, comparative analyses of income smoothing models indicate that the form and detection of smoothing depend heavily on performance conditions and regulatory criteria (23, 24). Thus, the stability of the earnings quality–smoothing relationship across regulatory regimes suggests that accounting standards modify the *intensity* and *structure* of smoothing rather than its fundamental existence.

The results also highlight the importance of firm-level characteristics. Firm growth consistently exhibited a positive and significant association with both earnings quality and income smoothing across multiple models. This outcome is consistent with evidence that growing firms face stronger capital market pressures and financing needs, which intensify incentives to stabilize earnings and present credible performance signals (14). Growth-oriented firms often rely on external capital, making them particularly sensitive to earnings perceptions and market valuation. Related research shows that earnings management interacts with corporate strategy and bankruptcy risk in nonlinear ways, suggesting that strategic positioning moderates financial reporting behavior (20). The present findings extend this insight by demonstrating that growth conditions remain a dominant driver of reporting behavior even under strengthened regulatory environments.

Interestingly, financial leverage, firm size, and firm age were not consistently significant predictors in the multivariate models. This contrasts with some international evidence that larger or more leveraged firms engage more in smoothing due to monitoring intensity and contractual pressures (14). The divergence may reflect contextual differences in the Iranian market, where ownership structures, state involvement, and financing mechanisms may attenuate the influence of conventional firm characteristics on reporting incentives. Moreover, governance structures and audit quality may play a more decisive role in shaping earnings outcomes, as suggested by evidence linking governance practices to earnings management behavior in emerging markets (12, 13).

The broader institutional environment further contextualizes the findings. Iranian capital markets have undergone structural evolution, with increasing emphasis on transparency, governance, and disclosure. Recent research demonstrates that corporate social responsibility reporting, audit quality, and governance jointly shape earnings management and firm value in Tehran Stock Exchange firms (21). The present results are consistent with this view: mandatory standards function most effectively when embedded within a wider ecosystem of governance and monitoring mechanisms. Standards alone improve reporting quality, but their full impact emerges through interaction with corporate governance, audit systems, and market discipline.

Taken together, the results support a multi-layered interpretation of accounting reform. Mandatory standards significantly improve earnings quality and reduce excessive income smoothing, thereby strengthening financial transparency. However, the enduring positive relationship between earnings quality and income smoothing reveals that managerial discretion is not eliminated but is channeled into more structured and potentially informative forms of earnings stabilization. This balance between regulation and managerial judgment reflects the complex reality of financial reporting, where institutional rules interact with economic incentives and strategic considerations.

These conclusions are consistent with international and domestic evidence on the consequences of accounting reforms (7, 8, 10, 22) and with theoretical perspectives emphasizing the economic role of earnings transparency in capital markets (1, 11). They also reinforce the policy implication that strengthening standards is a necessary but not sufficient condition for achieving fully transparent and decision-useful financial reporting.

This study is subject to several limitations. The analysis is restricted to firms listed on the Tehran Stock Exchange, which may limit generalizability to unlisted firms or other emerging markets. The use of historical accounting data constrains the ability to capture qualitative aspects of managerial intent and enforcement intensity. Additionally, the models explain a modest proportion of variance in earnings quality and income smoothing, suggesting that unobserved institutional and behavioral factors may play important roles.

Future studies may expand the analysis to cross-country comparisons to assess how different regulatory and enforcement regimes influence the earnings quality–income smoothing relationship. Researchers could incorporate

qualitative governance indicators, audit quality metrics, and ownership structures to deepen understanding of moderating mechanisms. Longitudinal designs capturing regulatory transitions over multiple reform cycles may also reveal dynamic effects of institutional change on financial reporting behavior.

Regulators should continue strengthening enforcement mechanisms and enhancing monitoring of compliance with accounting standards. Corporate boards and audit committees should integrate earnings quality metrics into governance frameworks to discourage excessive smoothing behavior. Practitioners and analysts should interpret earnings stability cautiously, distinguishing between informative smoothing and opportunistic manipulation, particularly in high-growth firms.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adheried in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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References

1. Barth ME, Konchitchki Y, Landsman WR. Cost of capital and earnings transparency. Journal of Accounting and Economics. 2013;55(2-3):206-24. doi: 10.1016/j.jacceco.2013.01.004.
2. Rahman JM, Xiong N. Real earnings management through sales manipulation and firm performance: evidence from China. Accountancy Business and the Public Interest. 2021. doi: 10.2139/ssrn.3851575.
3. Abbaszadeh S, Bahri Salas J, Jabbarzadeh Kongerlai S, Badavarenhendi Y. Identifying and Ranking Causal Factors and Earnings Management Strategies in the Banking Industry of Iran. Islamic Financial Research. 2021;10(2).
4. Saqafi A, Mohammadzaker Khani V. Earnings Smoothing: A Comprehensive Review of Concepts with Emphasis on Domestic and International Research. Accounting and Social Benefits. 2015;5(2):111-28.
5. Sabaghian Tosi O, Moradi Z, Yazdani S. Clarifying Earnings Smoothing from the Perspective of Financing and Auditor Judgment in Companies with Different Investment Opportunities. Scientific Journal Management System. 2023;2(6).
6. Mashaiehi B, Karami G, Ghaemi MH, Mohammadi Pour F. The Impact of Rule-Based and Principle-Based Accounting Standards on Earnings Management. Knowledge of Accounting and Management Auditing. 2020;9(33):179-92.

7. Al-Ghazzawi AM, Alsoboa SS. Impact of Improvements to the International Accounting Standards on Earnings Management in the Jordanian Industrial Corporations. Journal of Accounting & Finance. 2016;16(2).
8. Eiler LA, Miranda-Lopez J, Tama-Sweet I. The impact of IFRS on earnings management: evidence from Mexico. Journal of Accounting in Emerging Economies. 2021. doi: 10.1108/JAEE-11-2020-0316.
9. Noviari N, Damayanthi IGAE, Suaryana IGNA. Earnings quality before and after the implementation of PSAK 69. Accounting. 2021;7(4):727-34. doi: 10.5267/j.ac.2021.2.012.
10. Mahmoudi M, Noury I, Filserai M. The Impact of Reporting Incentives and Accounting Standards on Earnings Quality Improvement. New Research in Management and Accounting. 2016;14(2):157-76.
11. Tajir Zareh N, Hashemi Gol Safidi A. The Impact of Earnings Transparency on Capital Costs and Excess Returns: A Case Study of Companies Listed on the Tehran Stock Exchange. 2015.
12. Shah SF, Mehmood S, Khan MA, Popp J. Earnings management opportunistic or efficient in Pakistan? The role of corporate governance practices. Cogent Business & Management. 2024;11(1):2398716. doi: 10.1080/23311975.2024.2398716.
13. Akbarzadeh Zahmati M, Sofi HA, Dowlat Abadi A. Investigating the Impact of Corporate Governance on the Relationship Between Earnings Quality and Performance (Financial, Operational, Economic) with the Moderating Role of Capital Structure. Accounting and Economics. 2025;33.
14. Nurdiansyah D, Pardistya I, Mahpudin E, Nophiansah D. The empirical evidence of the effect of company size, leverage and earnings ability on income smoothing. Accounting. 2021;7(7):1805-12. doi: 10.5267/j.ac.2021.2.016.
15. Mehrani S, Eskandari Q, Ganji HR. The Relationship Between Earnings Quality, Earnings Smoothing, and Stock Risk. Empirical Studies in Financial Accounting. 2015;42(11):117-40.
16. Xiong F, Zheng Y, An Z, Xu S. Does internal information quality impact corporate cash holdings? Evidence from China. Accounting & Finance. 2020. doi: 10.1111/acfi.12657.
17. Oh H, Park S. The Effect of Corporate Sustainable Management on the Relationship between Cost Stickiness and Earnings Transparency. Sustainability. 2021;13(23):13453. doi: 10.3390/su132313453.
18. Peng M, Zeng Y, Yang DC, Li B. The role of smog in firm valuation. Emerging Markets Finance and Trade. 2022;58(3):883-95. doi: 10.1080/1540496X.2021.1929165.
19. Rinz K. Labor market concentration, earnings, and inequality. Journal of Human Resources. 2022;57(S):S251-S83. doi: 10.3368/jhr.monopsony.0219-10025R1.
20. Rabiei K, Fotouhi Fashtami H. Investigating the Nonlinear Impact of Earnings Management and Business Strategy on Corporate Bankruptcy Risk Using the Generalized Method of Moments (GMM). Management Accounting and Auditing Knowledge. 2025;14(56):183-92.
21. Yarifard R, Hashemi N. The Impact of Corporate Social Responsibility Reporting on Firm Value Considering the Role of Audit Quality, Corporate Governance, and Earnings Management in Companies Listed on the Tehran Stock Exchange. Accounting and Management Outlook. 2024;7IS - 94:1-27.
22. Tulcanaza-Prieto AB, Lee Y. Real Earnings Management, Firm Value, and Corporate Governance: Evidence from the Korean Market. International Journal of Financial Studies. 2022;10(1):19. doi: 10.3390/ijfs10010019.
23. Fereidoni D, Anvari Rastami AA. Comparative Analysis of the Impact of Performance and Regulatory Criteria on Earnings Smoothing Models: Tucker, Zaverin, and Jones (Variable Selection Approach Using AI). Investment Knowledge. 2021;10(39):1-28.
24. Fereidoni F, Darabi R, Anvari Rastami AA. Comparative Analysis of the Impact of Performance and Regulatory Criteria on Earnings Smoothing Models: Tucker, Zaverin, and Jones (Variable Selection Approach Using AI). Investment Knowledge. 2021;10(39):1-28.