

Examining the Impact of Board Structure on Stock Returns and Earnings Management: The Moderating Role of IT Governance in Tehran Stock Exchange Firms

Mehdi Rezaei

Assistant Professor, Department of Accounting, Faculty of Business and Economics, Persian Gulf University, Bushehr, Iran.
(Corresponding author)
rezaeimehdiphd@gmail.com

Marzieh Faqih

Ph.D. Student, Department of Accounting, Bushehr Branch, Islamic Azad University, Bushehr, Iran.
Mf839125@gmail.com

Roghayeh Shamsaee

Ph.D. Student, Department of Accounting, Bushehr Branch, Islamic Azad University, Bushehr, Iran.
shamsaee138@yahoo.com

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Abstract

Objectives: This study examines the impact of board structure on stock returns and earnings management, considering the moderating role of information technology (IT) governance in firms listed on the Tehran Stock Exchange. By exploring these relationships, the research aims to provide insights into how corporate governance mechanisms and IT governance influence financial performance and reporting quality.

Methodology/Design/Approach: The research is applied in nature and follows a correlational-descriptive methodology. The statistical population consists of firms listed on the Tehran Stock Exchange, with a research sample of 110 firms observed over eight years from 2015 to 2022. Multivariate regression analysis with panel data was conducted using Eviews software to test the research hypotheses.

Findings: The results indicate a significant relationship between board independence and stock returns, as well as between board size and stock returns. IT governance moderates these relationships, strengthening the positive effect of board independence on stock returns while intensifying the negative effect of board size on stock returns. Additionally, board independence has a significant positive effect on earnings management, whereas board size has a significant negative effect. IT governance also moderates the relationship between board structure and earnings management, influencing the extent to which board characteristics impact financial reporting practices.

Innovation: This research contributes to the literature by integrating IT governance into corporate governance studies, highlighting its moderating effect on the relationship between board structure, stock returns, and earnings management. The findings provide valuable implications for managers, investors, and regulators, emphasizing the importance of board composition and IT governance in evaluating corporate performance and making informed investment decisions.

Keywords: Board structure, IT governance, Profit management, Stock return.

1. Introduction

A firm is defined as a network of relationships established between the organization and its owners, as well as between the organization and a wide range of stakeholders, including employees, customers, vendors, and shareholders. This perspective is examined within the framework of stakeholder theory (Erkens, Hung, & Matose, 2012). Corporate governance benefits all financial stakeholders of the organization, including investors, creditors, board members, managers, and employees, as well as various industries and economic sectors associated with the organization (Chung & Isemoya, 2007). Corporate governance is of great importance as it enhances efficiency, fosters economic growth, and plays a key role in increasing investor confidence. This trust holds particular significance in a country's economy. Among government agencies, corporate governance has an even greater impact, as the beneficiaries of such organizations include all segments of society and the public. Therefore, identifying the factors influencing the quality of corporate governance is essential for establishing a strong and efficient structure in this field of study (Hassas Yeganeh, 2006).

The issue of corporate governance was officially introduced in Iran in 2004 and has since become a focal point for many organizations (Hassas Yeganeh & Salimi, 2011). In today's environment, the use of technology and information as tools for control and supervision significantly impacts organizational processes (Salim et al., 2021). The proper use and management of IT for transparency contribute to the establishment of democracy and good governance at the macro level of society. Government organizations, which form the core of the public sector, are affected by the effective and correct use of information technology. Additionally, government entities operating in the field of information technology maintain a direct relationship with ICT policies and tools due to the nature of their activities, implementation methods, and performance.

In previous studies, corporate governance has been examined from various perspectives, including research by Arkans, Hang, & Matose (2012), Tyne & Twaite (2011), and Babajani & Abdi (2010). However, this study specifically focuses on identifying and analyzing the relationship between the components of information technology governance and corporate governance in public organizations active in the IT sector.

Earnings management refers to the deliberate and purposeful manipulation of accounting results to alter the financial representation of an economic entity. It also encompasses conscious managerial actions, often intended to smooth periodic profit fluctuations (Octavia et al., 2022; Zhou, 2018). The use of an accrual basis results in accounting profit being recognized accordingly, typically leading to discrepancies between reported operating profit and net cash flows from operations, as well as certain accruals in the financial statements (Saghafi & Hashemi, 2004).

Given the above, the following research questions arise:

- 1) Does board independence have a significant effect on stock returns?
- 2) Does board size have a significant effect on stock returns, considering the moderating role of IT governance?
- 3) Does board independence have a significant effect on earnings management?
- 4) Does board size have a significant effect on earnings management?
- 5) Does board independence have a significant effect on earnings management, considering the moderating role of IT governance?
- 6) Does board size have a significant effect on earnings management, considering the moderating role of IT governance?

Therefore, this research aims to answer these questions and examine the relationship between corporate governance, IT governance, and business performance outcomes.

Theoretical Foundations and Research Background

• IT Governance

Information technology (IT) governance, through the effective use of data and technology, is recognized as a critical factor for achieving organizational success. Analyzing failures in IT innovations reveals that poor governance and the absence of appropriate role models among those responsible for managing risks contribute to detrimental outcomes, preventing organizations from fully realizing the benefits and value of IT investments (Mionsì & Randi, 2013).

Service management studies indicate that large organizations allocate approximately fifty percent of their core investments—specifically, expenditures related to fixed asset purchases—to the field of information technology (Simonsen & Johnson, 2008). IT governance is a fundamental responsibility of managers and board members, encompassing the leadership of organizational structures and processes to ensure that IT strategies align with the firm's objectives and contribute to its development. Unlike IT management, which focuses on specific operational decisions, IT governance primarily establishes clear accountability by defining who makes decisions, how decisions are made, and who is responsible for their execution.

Financial crises in global stock markets, particularly the Black September event in 1997 and subsequent financial scandals involving several American and European corporations in 2000, brought corporate governance into sharp focus concerning financial performance. A decline in public trust in capital markets compelled many countries to revise and enact laws that would restore investor confidence in market cycles and the financial information provided by organizations (Jamei & Lotfi, 2022).

Weak corporate governance can result in information concealment, deficiencies in oversight and control, and ineffective dissemination of information—factors that may ultimately lead to organizational failure and bankruptcy. Corporate governance determines the framework through which an organization's goals are formulated, as well as the mechanisms for achieving these goals and monitoring performance. In essence, corporate governance

consists of a set of laws, regulations, structures, processes, cultures, and systems designed to ensure accountability, transparency, fairness, and respect for stakeholder rights (Hassas Yeganeh & Baghomian, 2006).

• Board Structure

The board of directors is a group of elected individuals whose primary responsibility is to act in the best interests of shareholders. Board members formally oversee and regulate the performance of senior managers, with supervision and control being their most crucial duties. Given this oversight role, the board of directors serves as a key mechanism for reducing agency costs, thereby directly influencing various aspects of the firm's performance (Alderson, Ding, & Tang, 2021).

• Stock Returns

Stock returns are one of the key factors influencing investment decisions. The higher the return, the more attractive the investment becomes (Saeedi & Ebrahimi, 2010). Since investment is a fundamental driver of economic growth and national development, it is crucial to consider components such as risk and return. These two factors serve as primary criteria in analyzing and evaluating various types of investments. However, accurately predicting investment returns is inherently uncertain.

The stock market, as one of the most significant financial markets, plays a vital role in reflecting the economic conditions of a country (Hajibegloo & Mousaseni, 2022). Given its importance, forecasting stock prices or returns has been a central topic in financial literature, as it holds particular significance for investors, risk management professionals, and monetary policymakers (Al-Qahtani, Buri & Wu, 2020).

Broadly, four main approaches are used for stock price forecasting: technical analysis, fundamental analysis, classical time series forecasting, and machine learning methods (Rostami & Nezamuddin Makian, 2022).

Stock returns encompass all benefits derived from holding stocks, including capital gains. As a result, capital market investors seek to allocate their savings to investments that offer the highest returns. To achieve this objective, they rely on information that enables them to predict investment returns effectively.

• Profit Management

Earnings management refers to the deliberate actions taken by management to stabilize reported profits. In this process, managers aim to achieve a level of earnings that is both desirable and acceptable. More specifically, they attempt to smooth out abnormal profit fluctuations within the framework of generally accepted accounting principles and ethical management practices. This process may involve prioritizing or delaying the recognition of expenses and revenues, reallocating certain costs, or deferring them to future financial periods. The objective is to present a stable and consistent earnings trend over multiple reporting periods, thereby fostering a favorable and dynamic perception of the firm among investors and the capital market (Akbas & Kanikli, 2018).

Fallah, Molaei, and Zabihzadeh (2023) examined the factors influencing real earnings management in firms listed on the Tehran Stock Exchange. Their findings indicate that changes in firm performance and expectations of future earnings growth are directly associated with real earnings management. However, no significant relationship was found between real earnings management and factors such as firm size and ownership structure.

Ebrahimi et al. (2021) conducted a study using Bayesian models to identify the key factors affecting real and accrual-based earnings management in the capital market. Their results suggest that earnings management in Iranian-listed firms is a multidimensional phenomenon, with profitability, liquidity, and debt-related variables playing a major role. The complexity of these factors underscores the need for coordinated policymaking in financial and capital markets to mitigate and regulate earnings management practices in the stock exchange.

In 2023, Singh and Al-Holil investigated the impact of IT governance and board structure on firm performance and earnings management in firms listed on the Tehran Stock Exchange. Their findings indicate that among the three performance metrics—return on assets (ROA), return on equity (ROE), and Tobin's

Q—only operational return on assets exhibits a positive and significant relationship with IT governance at the board level. This suggests that a higher proportion of board members with IT expertise, the presence of a Chief Information Officer (CIO) or Chief Technology Officer (CTO) on the board, and the establishment of an IT committee contribute positively to a firm's operational performance.

Main Hypothesis

"The structure of the board of directors significantly influences stock returns and earnings management, with IT governance playing a moderating role."

Research Sub-Hypotheses

- **H1:** Board independence significantly affects stock returns.
- **H2:** The size of the board of directors significantly affects stock returns.
- **H3:** Board independence significantly affects stock returns, with IT governance as a moderating factor.
- **H4:** The size of the board of directors significantly affects stock returns, with IT governance as a moderating factor.
- **H5:** Board independence significantly affects earnings management.
- **H6:** The size of the board of directors significantly affects earnings management.
- **H7:** Board independence significantly affects earnings management, considering the moderating role of IT governance.
- **H8:** The size of the board of directors significantly affects earnings management, considering the moderating role of IT governance.

Research Methodology

The present study is applied in terms of its nature. In this study, the method of determining the correlation coefficient has been used, and the method of using the information is retrospective. Correlation research includes all studies in which the relationship between different variables is determined by using the correlation coefficient. The regression model used in this study has been selected from the type of multivariate linear regression. The data of this study have been examined simultaneously across periods and time series, and the research data are of a mixed type.

Since this research seeks to find a meaningful relationship between variables, it falls under descriptive and correlational research in terms of purpose. Additionally, from another perspective, this study is considered a descriptive post-event study because the data and information used were collected after the occurrence of events related to the research topic. In other words, it is based on the analysis of past information, such as the financial statements of firms. Furthermore, due to the applicability of its results in practical processes, this research is classified as applied research in terms of its nature and has a hybrid nature in terms of data type.

To collect and write the theoretical foundations section, a variety of sources such as domestic and international specialized journals have been used. Additionally, to collect other necessary data and information, financial and non-financial reports and statements published by firms listed on the Tehran Stock Exchange and the information available on the Codal website have been utilized. Descriptive and inferential statistics are used to statistically analyze the data and examine the research hypotheses. In the descriptive statistics section, indices such as the mean, median, minimum and maximum values, standard deviation, skewness, and kurtosis related to each variable are presented. Inferential statistics include the Limor F test and Hausman test (to determine and select the type of model), as well as the error component normality test, variance homogeneity test, autocorrelation test, reliability test, and finally, regression model estimation.

Research Regression Model

Model 1)

$$RET_{it} = \beta_0 + \beta_1 BIND_{it} + \beta_2 BSIZE_{it} + \beta_3 ITG_{it} + \beta_4 BIND_{it} * ITG_{it} + \beta_5 BSIZE_{it} * ITG_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \beta_8 ROA_{it} + \beta_9 AGE_{it} + \varepsilon_{it}$$

Model 2)

$$ACC_{it} = \beta_0 + \beta_1 BIND_{it} + \beta_2 BSIZE_{it} + \beta_3 ITG_{it} + \beta_4 BIND_{it} * ITG_{it} + \beta_5 BSIZE_{it} * ITG_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \beta_8 ROA_{it} + \beta_9 AGE_{it} + \varepsilon_{it}$$

Operational Definitions of Variables

Independent Variable: Information Technology Governance (ITG)

The indicators of Information Technology Governance (ITG) have been developed based on the framework of the Kubit standard. In a study, Hassas Yeganeh and Salimi (2011) ranked the indicators of IT governance in Iran. Therefore, in this study, the ranked indicators from their research have been used.

- 1) Planning and Organizing
- 2) This field involves a set of strategies and tactics aimed at utilizing information technology to advance business goals. To achieve this, a comprehensive program must be designed, where roles and activities are assigned to individuals in alignment with specific goals.
- 3) Acquisition and Implementation
- 4) To operationalize strategies, it is essential to identify, develop, and implement appropriate solutions. In this process, the integration between existing systems and software with new solutions must be carefully examined and analyzed.
- 5) Delivery & Support
- 6) This area includes activities such as training personnel, installing systems, and all day-to-day actions taken to maintain systems and address errors or issues.
- 7) Monitoring and Inspection
- 8) Information technology systems require periodic evaluations and reviews to ensure proper performance. This field encompasses processes aimed at monitoring and evaluating the organization's information systems and infrastructure. If managers have invested in information technology, the value of 1 will be assigned; otherwise, the value of 0 will be assigned (Singh & Al-Holil, 2023).

Board Structure

To measure the structure of the board, the following two indicators are used:

- 1) Independence of the Board of Directors (BIND): The ratio of non-executive members to the total number of board members.
- 2) Board Size (BSIZE): Refers to the total number of members on the board of directors.

Dependent Variable: Stock Return ($R_{i,t}$)

Return can be defined as the change in the value of an asset over a given period. In the case of stocks, this definition includes both the changes in the stock price and the dividends or benefits paid. The total return on stocks refers to the combined benefits accrued by the stock during the year. The stock price at the end of the fiscal year is compared to the stock price at the beginning of the fiscal year, along with any other paid benefits from the stock.

The return on stocks, denoted as $R_{i,t}$ for Firm i in year t , is calculated using the following relationship (Marefati, Soheil Beigi & Mokhtarati Tarani, 2022):

$$R_{i,t} = \frac{(p_{i,t} - p_{i,t-1}) + d_{i,t}}{p_{i,t-1}}$$

Where:

- $P_{i,t}$ = Stock price of firm i at the end of year t
- $P_{i,t-1}$ = Stock price of firm i at the beginning of year t
- $D_{i,t}$ = Dividends or benefits paid by firm i in year t

Earnings Management (ACC)

The proposed model for predicting hypotheses in the field of earnings management includes three main variables and several control variables, which have been identified as effective and determinant factors of earnings management in previous research. In this study, earnings management will be measured using the Kothari model. Kothari et al. developed a model similar to the modified Jones model, but it also incorporates the rate of return on assets. We will use the residuals of the model, also referred to as the model's "waste," to measure earnings management.

$$TA_{i,t}/A_{i,t-1} = \alpha_1(1/A_{i,t-1}) + \alpha_2(\Delta REV_{i,t}/A_{i,t-1}) + \alpha_3(PPE_{i,t}/A_{i,t-1}) + \alpha_4ROA_{i,t-1} + \epsilon_{i,t}$$

Control Variables:

- SIZE: The natural logarithm of total assets is used as a measure of the firm's size.
- ROA (Return on Assets): The return on assets is calculated by dividing net profit by total assets.

- AGE: The natural logarithm of the difference between the year of establishment and the year in question is used to measure the firm's age.
- LEV (Leverage): The ratio of total liabilities to total assets is used as a measure of leverage.

Research Findings

In this study, descriptive statistics related to the variables of the regression model are first presented. For this purpose, descriptive indices, including central tendency measures (such as mean and median), dispersion measures (such as variance and standard deviation), and indices related to the distribution shape (such as skewness and kurtosis), are calculated for each of the research variables. These statistics provide an overview of the characteristics of each variable in the model. The descriptive statistics of the research variables, derived from data for 110 firms active in the Tehran Stock Exchange during the period from 2015 to 2022, include the number of observations, mean, standard deviation, minimum, maximum, skewness coefficient, and kurtosis coefficient, which are presented in Table (1).

Table 1. Descriptive statistics of research variables

S. dev.	Max	Min	Mean	Variable
RET	1.0213	15.4313	-0.8193	1.8618
Acc	0.0016	0.8029	-0.6841	0.1692
BIND	0.6547	1.0000	0.0000	0.1962
BSIZE	5.0432	7.0000	5.0000	0.3206
ITG	0.2295	1.0000	0.0000	0.4208
LEV	0.5296	1.5053	0.0139	0.2239
SIZE	15.3893	21.5717	11.6388	1.7145
ROA	0.1904	0.9171	-0.3298	0.1582
AGE	3.2065	4.1589	2.1972	0.4215
Bivalent Variables				
ITG	1	202	0/23 %	
	0	678	0/77 %	

In Table (1), several concepts related to the descriptive statistics of variables, including mean, median, minimum and maximum values, standard deviation, skewness, and kurtosis, are presented. Among these, the central parameters, as part of the descriptive measures, represent the characteristics of the data in relation to the center of distribution. The mean, which

is known as the equilibrium point and the center of gravity of a statistical distribution, is considered one of the most appropriate indicators for displaying the centrality of data. In Table (1), the number of

observations related to the studied firms is 880 (110 firms over 8 years).

The results of the durability test for the combined data presented in Table (2) indicate that all the variables studied are stable.

Table 2. Results of the Durability Test for the Variables of the Models

Variable	Test Statistics	Sig	Results
RET	-20.922	0.0000	Stationary
Acc	-16.153	0.0000	Stationary
BIND	-20.609	0.0000	Stationary
BSIZE	-10.611	0.0000	Stationary
ITG	-6.296	0.0000	Stationary
LEV	-7.676	0.0000	Stationary
SIZE	-12.022	0.0000	Stationary
ROA	-10.160	0.0000	Stationary
AGE	-11.617	0.0000	Stationary

Table 3. The results of the test of the absence of collinearity between explanatory sentences

Variable	Variance Inflation Factor
BIND	1.343314
BSIZE	1.240844
ITG	3.048316
BIND* ITG	1.335761
BSIZE* ITG	3.071489
LEV	1.246199
SIZE	1.086312
ROA	1.240023
AGE	1.056752

Table 4. Correlation between the variables of the research model

Probability	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
RET	1.0000								
Possibility	-----								
Acc	0.0086-	1.0000							
Possibility	0.7995	-----							
ITG	0.1219-	0.0335-	1.0000						
Possibility	0.0003	0.3216	-----						
BIND	0.0088-	0.0074	0.0295	1.0000					
Possibility	0.7938	0.8261	0.3816	-----					
BSIZE	0.0130	0.0182	0.0398-	0.1133	1.0000				
Possibility	0.7006	0.5898	0.2379	0.0008	-----				
LEV	0.0025-	0.0583-	0.0548-	0.1623-	0.0176-	1.0000			
Possibility	0.9406	0.0841	0.1040	0.0000	0.6018	-----			
SIZE	0.0516-	0.1128	0.1535	0.0351-	0.0607	-0.0665	1.0000		

Probability	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Possibility	0.1258	0.0008	0.0000	0.2985	0.0718	0.0488	-----		
ROA	0.1950	0.1477-	0.0267-	0.0829	0.0056-	0.3992-	0.1886	1.0000	
Possibility	0.0000	0.0000	0.4287	0.0139	0.8691	0.0000	0.0000	-----	
AGE	0.0352	0.0069	0.1070	0.1002-	0.0785-	0.1206-	0.0648-	0.0406	1.0000
Possibility	0.2976	0.8376	0.0015	0.0029	0.0198	0.0003	0.0545	0.2293	-----

Table 5: Results of the Limmer F test for the first and second models

Exam Statistics	Degree of Freedom	P value	Results
0.735	(109,761)	0.879	Using Consolidated Data
0.721	(109,761)	0.389	Using Consolidated Data

The first model of the research

According to the regression coefficient for board independence, it can be concluded that board independence has a significant relationship with the stock returns of firms listed on the Tehran Stock Exchange ($p > 0.05$). Similarly, based on the regression coefficient for board size, it can be concluded that the size of the board of directors has a significant relationship with the return on equity for firms listed on the Tehran Stock Exchange ($p > 0.05$). Additionally, the regression coefficient for information technology governance shows a significant relationship between IT governance and stock returns for firms listed on the Tehran Stock Exchange ($p > 0.05$).

The results in Table (6) reveal that the coefficient of board independence on stock returns is significant for the firms under study ($p > 0.05$). Likewise, the coefficient for board size on stock returns is significant for these firms ($p > 0.05$). The results further indicate that at the 95% confidence level, the t-values for all variables, except for firm age and financial leverage, lie within the rejection zone of the null hypothesis, indicating that these variables are significant in the model.

Moreover, the findings for the control variables show that return on assets has a positive and significant effect on stock returns. In contrast, the size of the firm exhibits a negative and significant effect on stock returns.

Table 6. Results of Partial Coefficients (First Model)

$RET_{it} = \beta_0 + \beta_1 BIND_{it} + \beta_2 BSIZE_{it} + \beta_3 ITG_{it} + \beta_4 BIND_{it} * ITG_{it} + \beta_5 BSIZE_{it} * ITG_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \beta_8 ROA_{it} + \beta_9 AGE_{it} + \varepsilon_{it}$				
Variables	Coef	T statistic	Sig	Results
C	1.9867	2.0681	0.0390	Confirm
BIND	-0.139	-3.838	0.000	Confirm
BSIZE	-0.097	3.132	0.001	Confirm
ITG	0.368	3.265	001/0	Confirm
BIND* ITG	-0.124	3.757	0.000	Confirm
BSIZE* ITG	-0.1261	-0.4221	0.6731	Confirm
LEV	0.3943	1.6404	0.1014	Disapproval
SIZE	-0.0605	-2.2761	0.0232	Confirm
ROA	1.5278	4.4369	0.0000	Confirm
AGE	0.0604	0.5246	0.6000	Disapproval
R-squared	Coefficient of Determination		0.195	
Adjusted R-squared	Adjusted coefficient of determination		0.479	
F-statistic	Statistic F		15.351	
Prob(F-statistic)	Significance level		0.0000	
Durbin-Watson stat	Watson Durbin		2.444	

The results indicate that at the 95% confidence level, the t-values for all variables except for firm age and financial leverage, fall within the rejection zone of the null hypothesis, implying that these variables are significant in the model. Furthermore, the findings for the control variables show that return on assets has a positive and significant effect on stock returns. Conversely, firm size exhibits a negative and significant effect on stock returns.

The second model of the research

Based on the value of the regression coefficient for board independence, it can be concluded that there is no significant relationship between board independence and earnings management in firms listed on the Tehran Stock Exchange. As a result, the fifth hypothesis is rejected. On the other hand, the negative value of the regression coefficient for board size suggests that the size of the board of directors has a significant negative relationship with earnings management in these firms, thereby confirming the sixth hypothesis. Furthermore, the negative value of

the regression coefficient for information technology governance indicates a negative (inverse) relationship between IT governance and earnings management in firms listed on the Tehran Stock Exchange. The results presented in Table (7) show that the coefficient for board independence on earnings management is significant for the firms under study, considering the moderating role of IT governance ($p > 0.05$). Similarly, the coefficient for board size on earnings management is also significant for the firms under study ($p > 0.05$).

The results indicate that at the 95% confidence level, the t-values, except for the age of the firm, fall within the rejection zone of the null hypothesis, meaning that the variables are significant in the model. The results for the control variables reveal that both return on assets and firm size have a positive and significant effect on earnings management. Additionally, the findings show that financial leverage has a negative and significant effect on earnings management.

Table 7. Results of Partial Coefficients (Second Model)

$ACC_{it} = \beta_0 + \beta_1 BIND_{it} + \beta_2 BSIZE_{it} + \beta_3 ITG_{it} + \beta_4 BIND_{it} * ITG_{it} + \beta_5 BSIZE_{it} * ITG_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \beta_8 ROA_{it} + \beta_9 AGE_{it} + \varepsilon_{it}$				
Variables	Coef	T statistic	Sig	Results
C	-0.407	3.002	0.002	Confirm
BIND	0.133	3.526	0.000	Confirm
BSIZE	-0.0594	-7.3486	0.0000	Confirm
ITG	-0.1558	-1.9805	0.0483	Confirm
BIND* ITG	-0.101	-3.004	0.002	Confirm
BSIZE* ITG	0.124	3.719	0.000	Confirm
LEV	-0.0879	-4.4673	0.0000	Confirm
SIZE	0.0125	5.6328	0.0000	Confirm
ROA	0.2116	7.0628	0.0000	Confirm
AGE	0.0033	0.3968	0.6916	Disapproval
R-squared	Coefficient of Determination		0.674	
Adjusted R-squared	Adjusted coefficient of determination		0.565	
F-statistic	Statistic F		7.770	
Prob(F-statistic)	Significance level		0.0000	
Durbin-Watson stat	Watson Durbin		2.103	

Discussion and Conclusion

This study aimed to provide a comprehensive understanding of the key variables and investigate the effect of information technology governance and board

structure on stock returns and earnings management in firms listed on the Tehran Stock Exchange. The findings of this research have the potential to be widely applied in decision-making processes and

contribute to advancing scientific perspectives on these fundamental variables.

The results show that board structure, considering the moderating role of IT governance, significantly impacts stock returns and earnings management. A key aspect of this research is the emphasis on information technology governance, which includes policies, processes, and structures for the efficient management and control of IT within organizations. The findings highlight that board size plays a critical role in the quality of board oversight, especially in monitoring earnings management (Chowdari, 2021; Khan, 2022). According to agency theory, as proposed by Jensen (1993), an increase in the number of managers often leads to communication and coordination issues, which in turn reduce efficiency and cohesion among board members, resulting in delays in decision-making (Yermack, 1996). Furthermore, a larger board size is associated with higher agency costs and myopia. Agency theory suggests that greater board independence improves governance, as independent external directors can better represent shareholders' interests, resolving conflicts between shareholders and internal firm members (Kato & Long, 2006; Rahman et al., 2021).

Based on the findings, several recommendations are proposed, including the alignment of IT strategies with the firm's macro strategies to help achieve business and financial objectives. Additionally, improving the firm's IT processes is recommended to enhance information quality, efficiency, and security, while also fostering better internal and external communications.

One limitation of this research is its quasi-experimental nature, as certain factors affecting the results, such as economic conditions, political factors, and the global economic situation, could not be controlled. These factors may influence the findings of the study. Additionally, excluding firms in the financial, insurance, and banking industries may limit the generalizability of the results. Given that this study was conducted between 2015 and 2022 with data from firms listed on the Tehran Stock Exchange, the findings should be interpreted with caution when applied to other time periods or firms not active on the exchange.

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