

How to Cite:

Varnamkhasti, J. H. (2022). Studying the impact of corporate governance on earning management with the mediating role of financial leverage: Case study companies listed on the Tehran stock exchange. *International Journal of Health Sciences*, 6(S3), 4094–4111. <https://doi.org/10.53730/ijhs.v6nS3.6663>

Studying the impact of corporate governance on earning management with the mediating role of financial leverage: Case study companies listed on the Tehran stock exchange

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Abstract---The present study aims to investigate the impact of corporate governance on the profit management of companies listed on the Tehran Stock Exchange during 2014-2020. This study is experimental and the research method is correlational. The statistical population includes all companies listed on the Tehran Stock Exchange. The required data were collected by referring to the audited financial statements of companies listed on the Tehran Stock Exchange over a period of 7 years for 120 companies. Eviews-10 software was also used to analyze the data. The results showed that there is no significant systematic relationship between corporate governance characteristics (board independence, duality of the CEO, and the number of board meetings) and abnormal operating cash flows at any of the significant levels ($p > 0.01$, $p > 0.05$, 0.10). Moreover, the results showed that there is a significant negative relationship between financial leverage and earning management of companies because the probability value of this variable (0.02) is less than the standard value of 0.05. In addition, the findings showed that there is a positive and significant relationship among financial leverage, corporate governance, and earnings management. Therefore, it can be concluded that financial leverage can play a mediating role between corporate governance and earnings management.

Keywords---financial leverage, stock exchange, corporate governance, earnings management.

Introduction

After some financial failures, many domestic and international companies are increasingly aware of the required policies and corporate governance procedures because of weakness in corporate governance systems and low-quality of financial

reporting of policymakers and regulators (Kalainathan & Vijayarani, 2014). Corporate governance works to guarantee that the management of a company is maximizing the value of a company and reducing the conflict of interest between managers and shareholders due to the separation of ownership from the modern companies' management (Chelogoi, 2017). There are some hypotheses that the management of a company may follow his personal goals even by ignoring the interest of other stakeholder groups, and may even try to influence the reported figures to present a good picture of the company's financial situation (Chalevas & Tzovas, 2010). This means that in situations where goals are not met, companies often resort to earnings management (Bedard & Johnstone). The effectiveness of corporate governance in minimizing the occurrence of earnings management has been discussed in the accounting profession. The literature argues about the prevention earnings management by the quality of corporate governance performance (Katmon & Farooque, 2017; Liu & Lu, 2007; Smaraidos, Thanasas, & Filiou, 2018). Bekiris and Doukakis (2018) point out that corporate governance rules seem to limit management's willingness to manage earnings and lead to higher credit for the financial statements of companies listed on the Athens, Milan, and Madrid Stock Exchanges. However, in contrast to the mentioned studies, there are some studies that show a positive effect of corporate governance on earnings management practices. Seng and Findlay (2013) examined the relationship between corporate governance mechanisms and earnings management in New Zealand stock companies, and they found that the board size is significantly related to earnings management and a larger board seems inefficient in this area. In addition, Chalevas and Tzovas (2010) suggested that corporate governance mechanisms did not affect the effort of managers to manipulate corporate revenue. Hence, the existing literature provides various pieces of evidence on corporate governance and earnings management.

Evidence suggests that a financial crisis can be attributed, among other factors, to failures and weaknesses in corporate governance arrangements (Aebi, Sabato, & Schmid, 2012). The right decisions about the complete structure of capital through corporate governance are important and practical for the growth of the company. Studies on the quality of corporate governance and financial leverage mainly focus on assessing the impact of some management determinants on leverage, including board size (Berger, Ofek, & Yermack, 1997; Harford et al., 2008), CEO characteristics (Malmendier, Tate, & Yan, 2011), and the audit committee (Chen, Chen, & Wei, 2009). Corporate governance is the system by which companies are governed and controlled. A single factor such as ownership structure and the board characteristics cannot completely reflect the overall quality of corporate governance (Bhagat & Bolton, 2008). These different one-factor measurements make it difficult to reach a consensus on the effects of corporate governance quality. A closer look at the financial condition of companies shows that the majority of listed companies have excessive debts, which weakens their current and future financial situation. Excessive debt is mainly due to wrong decisions of the current management (French & McKillop, 2016). Most related research uses examples from developed countries to analyze the relationship between corporate governance and leverage. The evolution of corporate governance in listed companies is relatively unique and therefore needs careful consideration (Jiang & Kim, 2015). Furthermore, related empirical studies have not found the positive, negative, or no effect of corporate governance on

financial leverage (Jiraporn & Gleason, 2007; Chen & Matousek, 2020). Financial leverage and governance of companies with higher leverage will be at the risk of bankruptcy and cannot find new creditors in the future if they are unable to pay their external financing obligations (Ellul & Pagano, 2019). In such cases, if the company wants to receive a new loan, it will be scrutinized by creditors in terms of debt repayment in future periods. Therefore, sufficient cash is essential for continued operations and future profitability (Alter & Elekdag, 2020). The increasing emphasis of financial analysts and investors on operating cash flows, as a clearer indicator of the company's performance, has motivated the management to manage profits in order to provide a favorable picture of operating cash flows and be able to maintain external financing sources (Firth et al, 2008). As a result, companies with higher leverage pay more attention to operating cash flows than other financing sources (Graham et al., 2015). The results of previous research show that companies with high financial leverage are often involved in earnings management in order to avoid default in debt contracts. In these studies, earnings management has been measured using criteria based on accruals (Jiang & Kim, 2015; Subhasinghe & Subhasinghe, 2021). The results of these studies show that increasing financial leverage is associated with decreasing earnings management based on accruals. Indeed, it can be said that companies with increasing debt and financial leverage can be involved in real earnings management (Ho et al, 2011). Real earnings management is associated with a change in the timing or structure of actual activities of a business. Hence, increasing financial leverage can be an incentive to move from accrued earnings management to real earnings management. Therefore, the research question is whether corporate governance is effective in managing the earnings of companies listed on the Tehran Stock Exchange. Can financial leverage play a mediating role in the relationship between corporate governance and earnings management?

Literature review

In agency theory, the separation of ownership and control is considered as one of the characteristics of a modern company, which leads managers to use their company-specific experience and managerial expertise to achieve superiority over company owners in operations who are absent in businesses (Dibia & Onwuchekwa, 2014). Since managers are responsible for the business, the risk is to perform in their own best interests, not the owners' interests. Agency theory shows the difference between the principal and agent interests, and that principal can control or reduce it by motivating the agent and incurring costs arising from activities that are designed to monitor and limit the activities of the agents' personal interests (Jensen & Meckling, 1976).

The relationship between the main factors had problems such as information asymmetry and agency costs. Managers can protect their rights by providing appropriate incentives for agents and incurring regulatory costs designed to limit agents' irregular behavior (Shapiro, 2005). Due to information asymmetry, managers face two main problems which are undesirable choices (how to choose the most capable managers) and ethical risks, which mean how to provide appropriate motivation to managers to make the right efforts and decisions in line with the stakeholders' interests (Hoque, 2006; Habbash & Alghamdi, 2015). In order to reduce information asymmetry, governance mechanisms such as

subcommittees of the board consisting of managers with appropriate characteristics should exist (Wiseman, Cuevas-Rodriguez, & Gomez-Mejia, 2012). Managers may have strong motivations to participate in earnings management. Because stakeholders and other potential investors obtain valuable information from earnings information, it becomes difficult to make optimal investment decisions when earnings are manipulated (Davidson, Jiraporn, Kim, & Nemec, 2004). Eisenhardt (1998) believed that reliable (external) financial accounting standards and good corporate governance can reduce such agency problems. Previous accounting research has examined the relationship between various factors of corporate governance and earnings management. Most previous studies have focused on the board and the audit committee as agents of corporate governance mechanisms (such as Klein, 2002; Seng & Findlay, 2013; Smaraidos et al., 2018).

The board size is one of the determinants of corporate governance. There is some literature on the effect of board size on earnings management. Seng and Findlay (2013) showed that board size is significantly associated with earnings management in New Zealand. This indicates that larger boards are inefficient in their monitoring functions compared to smaller boards. Another view shows that small boards may not be effective in monitoring senior management behavior (Zahra & Pearce, 1998). Some studies argue that larger boards with different specializations can develop synergistic board monitoring to reduce the incidence of earnings management (Peasnell, Pope, & Young, 2005; Xie et al., 2003). Xie et al. (2003) believed that larger boards are associated with lower levels of discretionary current accruals, and larger boards may bring more experienced managers to the board, so experienced managers seem to play a role in limiting earnings management.

Another determining factor in corporate governance is the independence of the board. Xie et al. (2003) argue that external members of the board established an independent control mechanism over the board process to reduce profit management practices. Similarly, Klein (2002) in a study on US companies showed that there is a negative statistical relationship between earnings management (measured by the Jones model) and the percentage of independent directors on the board. Smaraidos et al. (2018) pointed out that companies with strong and independent boards of directors ignore related earnings management practices. In one study, in contrast to the study on Chinese companies by Yang, Tan, and Ding, a positive relationship between the presence of independent board members and earnings management through revenue smoothing behaviors was found.

CEO duality is an opportunity to focus executive power, which can lead to management recklessness. Thus, a single CEO may provide more effective oversight (Cornett, Marcus, & Tehranian, 2008). According to agency theory, the chairman should be independent, because a CEO with too much power can easily manipulate earnings management (Rahman & Ali, 2006). Klein (2002) suggests that a CEO with too much power over board responsibilities can easily manage revenue. However, Rahman and Ali (2006) found that the negligible relationship between duality and earnings management can be developed accordingly to the third research hypothesis.

Marzieh Nodeh et al. (2021) in the study examined the effect of corporate governance mechanisms on the relationship between transactions with affiliates and earnings management. The statistical population of this study was the companies listed on the Tehran Stock Exchange. A statistical sample consisting of 110 companies in the period 2011-2016 was selected using a multivariate regression model with a data panel economy model. The results showed that companies that deal with affiliates have more profit management than companies that do not deal with affiliates and as the volume of transactions with affiliates increases, earnings management will increase too. On the other hand, the composition of the board of directors and institutional shareholders has a negative and positive effect on the relationship between transactions with affiliates and earnings management, respectively. In other words, as the composition of the board decreases, it leads to an increase in earnings management, and as the percentage of institutional shareholders in the company increases, the effect of the company's earnings management will also increase. In addition, according to the results, control variables, financial leverage, and firm life have a negative (inverse) relationship, and firm size variable has a positive and significant relationship with earnings management, but there is no relationship between growth opportunities and earnings management.

Ghorbani Kharkoshi and Masoumi (2021), in a study, examined the effect of industry competition on the relationship between corporate governance and earnings management in companies listed on the Tehran Stock Exchange. The statistical population was all companies listed on the Tehran Stock Exchange in the six-year period during 2013-2018. 148 companies and a total of 888 years-companies were considered as statistical samples based on the systematic elimination sampling method. The present study was applied in terms of purpose and for data collection; it used the descriptive-post-event method. Multivariate regression models were used to test the hypotheses using EVIEWS 8 software (Panel data method). The results showed that there was a positive and significant relationship between industry competition and corporate profit management during the study period. However, the moderating effect of industry competition on the relationship between corporate governance and earnings management was not confirmed. Falahatkar et al. (2021), in a study examined the effect of corporate governance on the relationship between earnings management and the information disclosure level of companies listed on the Tehran Stock Exchange during 2010 to 2018. The statistical sample was 159 companies.

The method of testing the hypotheses was correlation and multiple regression. The results showed that there is a significant inverse relationship between earnings management and the level of information disclosure and the components of corporate governance (except for the number of board meetings) weaken this relationship. The results of control variables showed that there is an inverse and significant relationship between financial leverage and the level of information disclosure and the relationship between company size and profitability with the level of information disclosure is direct and significant. Mohagheghkia (2020) in a study examined whether market power and competition in the product market can modulate the relationship between corporate governance and earnings management. To investigate this issue, using 118 companies listed on the Tehran Stock Exchange through linear regression were studied and analyzed during

2014-2018. The results showed that corporate governance and earnings management have a significant relationship. Furthermore, testing other hypotheses showed that competition in the product market and market power moderates the relationship between corporate governance and earnings management.

Ismaili and Javan (2016), in a study, examined the effect of leverage and liquidity on earnings management of companies listed on the Tehran Stock Exchange. The sample included 154 companies listed on the Tehran Stock Exchange during the period 2010 to 2014. Combined regression models and panel data were used to test the hypotheses. The results of research models showed that financial leverage affects earnings management based on working capital accruals and liquidity affects both earnings management. Ahadi Sarkani et al. (2015) in the study examined the interactive role of earnings quality in the sensitivity of financial leverage to GDP growth and the volume of assets in Iranian banks. Financial leverage as a dependent variable related to 15 banks, for the period of 2009 to 2016 has been examined. Findings show that GDP growth has a significant and positive relationship with changes in financial leverage and changes in their assets have a positive and increasing interactive role. The results also indicated a significant and positive relationship between assets and changes in financial leverage. The interactive role of earnings quality has been an increasing role as an accounting factor.

Zhou et al. (2021) in a study examined the relationship between the quality of corporate governance and financial leverage in China. Using a sample of listed non-financial corporations in China from 2000 to 2018, this study examined the ways in which the quality of corporate governance affects corporate financial leverage. Experimental results show that improving the quality of corporate governance has a strong and negative effect on financial leverage for the full sample and sub-sample based on ownership, industry, scale, and so on. This negative effect is mediated by internal financing and company shares. In addition, in terms of corporate performance, we show that financial leverage significantly reduces financial performance, especially during recessions, and can be offset by improving the quality of corporate governance. Subasinge and Kwalalatna (2021) examined the impact of corporate governance on earnings management in Sri Lanka listed companies.

The study was conducted using a quantitative methodology and secondary data obtained mainly from annual reports published by 175 non-financial companies listed on the Colombo Stock Exchange from 2017 to 2019. The experimental results of this study showed a significant positive relationship between the frequency of audit committee meetings and earnings management. The rest of the corporate governance characteristics do not have a significant impact on the level of profit management. Mamaro and Legotlo (2021) studied the relationship between financial performance and the financial leverage of listed retail companies in South Africa. The data collection included the annual financial reports of the retail companies for the period 2010 to 2020, which included 170 views. Experimental results showed that financial performance is positively related to the financial leverage of listed retail companies, while other variables (financial leverage, company growth) positively affect financial performance.

Liquidity has a positive effect on financial performance, but company size has a negative effect on it. Senan et al. (2021) investigated the relationship between financial leverage and financial performance in Indian listed companies. This study used both static models (combined, fixed, and random effects) and a generalized method of moment estimation. The results showed that profit after tax, return on equity, return on investment, and Tobin-Q are the most important variables of financial success that affect the financial leverage of Indian listed companies. In addition, profit after tax, return on investment, return on equity, and Tobin-Q are among the indicators of financial success that have a significant impact on financial leverage. Considering the company's liquidity, the findings show that the current ratio and the fast ratio have a significant impact on the financial leverage of Indian listed companies.

Research Methodology

This experimental research is conducted in an inductive-deductive way. The research method is correlational. In the theoretical foundations and research background, mainly Latin and Persian articles from the Internet, libraries, as well as specialized journals and dissertations are used. For data collection, the reflected information in the financial statements and the necessary information to test the hypotheses, the database of Rahavard Novin software, Tadbir Pardaz software, and the compact disc of financial statements of listed companies are used. The collected data are entered in Excel software and the necessary adjustments are made to them. Then the required variables are extracted and entered into Spss and Eviews software for analysis. The required data have been collected by referring to the audited financial statements of companies listed on the Tehran Stock Exchange in a period of 7 years (2014-2021) of 120 companies. In this research, sampling is done by exclusion method with the following restrictions:

- Have been listed on the Tehran Stock Exchange until the end of February 2021.
- The end of the companies' fiscal year is March 19.
- Companies have not changed their fiscal year in the period in question.
- Companies do not stop operating in the desired period
- The financial statements and accompanying notes of the companies in the years 2014 to 2021 should be available completely on the site of the stock exchange.
- All information related to the components of calculating the variables of the equations is available and disclosed.

Research models and variables

In the present study, to investigate the effect of corporate governance on earnings management with the mediating role of financial leverage (case study: companies listed on the Tehran Stock Exchange), one of the proposed research models of Zhou et al. (2021) and Subasinge and Calvalatna (2021) were used, which are as follows:

$$\begin{aligned} \text{Earnings management}_{it} &= \beta_0 + \beta_1 \text{Corporate governance}_{it} + \beta_2 \text{Financial Leverage}_{it} \\ &+ \beta_3 \text{Corporate governance} * \text{Financial Leverage}_{it} + \beta_4 \text{SIZE}_{it} + \beta_5 \text{ROE}_{it} + \varepsilon_{it} \end{aligned}$$

Dependent variable

Earnings management_{it}: Indicates earnings management, which is calculated using abnormal operating cash flows, and the calculations will be as follows (Zhou et al., 2020):

$$\frac{CFO_{it}}{TA_{it-1}} = \alpha_0 \frac{1}{TA_{it-1}} + \alpha_1 \frac{Sales_{it}}{TA_{it-1}} + \alpha_2 \frac{\Delta Sales_{it-1}}{TA_{it-1}} + \delta_{it}$$

CFO_{it}: Indicates the operating cash flows of Company i at the end of year t.

TA_{it-1}: Represents the total assets of the company in Company i at the end of year t-1.

Sales_{it}: Represents the sales of the company i at the end of year t.

ΔSales_{it-1}: Represents the sale of Company i at the end of year t-1.

Independent variable

Corporate governance_{it}: It shows corporate governance. In this research, corporate governance is considered as the dependent variable:

- Duality Role of the CEO (DUAL): It is a permissible variable that if the CEO is the chairman, it will be equal to 1 and otherwise it will be zero.
- Independence of the Board of Directors (INDEP): The percentage of board non-executive members to all board members.
- Number of Board Meetings (BMEET): The number of board meetings for the company.

Mediator variable

Financial Leverage_{it}: It shows financial leverage. To calculate it, the ratio of total corporate debt to the book value of corporate assets was used.

Control variable

SIZE_{it}: It shows the company size, which was calculated using the natural logarithm of the book value of the company's assets.

ROE_{it}: It indicates the rate of return on equity. To calculate it, the ratio of net operating profit to book value of total equity was used.

Data analysis

The following table provides descriptive statistics of research variables including mean, medium, minimum, maximum, standard deviation, skewness and kurtosis. As can be seen, all research variables have been studied in terms of descriptive statistics, and in terms of skewness and kurtosis, all variables are in good condition. The mean is the main central indicator and shows the average of the data. If the data are aligned on a regular axis, the mean value is exactly the

equilibrium point or center of gravity of the distribution. The average earnings management is equal to 0.348 and its minimum and maximum values are equal to 0.473 and 0.027.

Table 1
Descriptive statistics of research variables

Symbol		Mean	Maximum	Minimum	Standard deviation	Skewness	Kurtosis
Corporate governance	DUAL	0.13	0.56	0.011	0.12	0.46	3.39
	INDEX	0.438	0.473	0.027	0.059	-1.015	2.468
	BMEET	0.120	0.387	0.071	0.042	2.329	7.487
Earnings management	$\frac{CFO_{it}}{TA_{it-1}}$	0.348	0.473	0.027	0.059	-1.015	2.468
Financial Leverage _{it}		0.628	0.925	0.120	0.246	-0.679	2.415
Corporate governance * Financial Leverage _{it}		0.120	0.387	0.071	0.042	2.329	7.487
SIZE _{it}		0.133	0.764	0.133	0.208	0.195	1.997
ROE _{it}		0.123	9.00	3.00	1.15	0.59	2.87

Panel data

First, in order to estimate the above model using the data panel method, tests should be used to identify the type of data panel model, which will be explained in the following.

- **Fit Tests of Research Models**
To evaluate the accuracy of using the variables of this research in least squares regression, the classical least squares regression assumptions for the fitting of the fitted model must be provided. For this purpose, in the following, we examine the classical hypotheses of least squares.
- **Convergence Test**
Examining the convergence in panel data is very important. If the model variables are not static, the model estimate may lead to a false regression. Therefore, to prevent false regression, before estimating the research models, a convergence test is performed to estimate the desired pattern after ensuring the existence of a long-term relationship. According to the ADF statistics and the related probability, the existence of a consensus in the research model can be accepted. In other words, the null hypothesis that there is no convergent in the model is rejected. Therefore, it can be said that there is a long-term relationship between the dependent variable and other variables.

Table 2
The Results of Cao Convergence Test of the Research Model

Research model	t-statistics	Probability
ADF convergence test of the research model	-3.963	0.0000

Normality of the residuals

One of the most common tests used for normality is the Jarque-Bera test (JB). The null hypothesis of Jarque-Bera test indicates the normality of the model residuals and therefore the probability value of the test should be more than 0.05 to confirm the normality of residual at the level of 95%. The test results confirm the null hypothesis and normality of model residues.

Table 3
The Results of Jarque-Bera Test

Dependent variable	JB statistic	Probability value	Result
Earnings management _{it}	0.793	0.0963	Normal

Stability variance test of error sentences (Breusch-Pagan test)

The Breusch-Pagan test is used to prove the lack of autocorrelation between the residuals of the models. What is important here is that the model residues should be without autocorrelation. According to the results of Breusch-Pagan test and considering the significance level and the probability value that is more than 0.05, so the null hypothesis of the research that there is no autocorrelation in the model residues is accepted. Also, according to the F-statistic as well as the multiplication statistic of the number of observations in the coefficient of determination, we conclude that there is no correlation between the residuals of the model itself.

Table 4
Breusch-Pagan Test

Statistic	Computational statistic	Significance level
f-statistic	4.789	0.2509
Obs*R-squared	68.759	0.0854

Panel unit root test for reliability of variables

The unit root test is one of the most common tests used today to detect static variables. In these tests, the process of examining similarity (stability) is all the same except for the Hadry method. Therefore, by rejecting H_0 , instability or the root of the unit is rejected and stability is confirmed. In the present study, two tests of LLC and IPS have been used to examine the significance of the research variables. The results of each of the two tests are presented in the table below. As it can be seen, the null hypothesis of LLC test with regard to the instability of all

variables at a 95% probability level is rejected. Therefore, all variables are at a stable level.

Table 5
Unit Root Test

Abbreviation	LLC statistic	Probability level	Stable at the level
$DUAL_{it}$	042.752	0.000	Stable
$INDEP_{it}$	-38.741	0.000	Stable
$BMEET_{it}$	-28.158	0.000	Stable
$\frac{CFO_{it}}{TA_{it-1}}$	-75.428	0.000	Stable
Financial Leverage $_{it}$	-47.541	0.000	Stable
Corporate governance * Financial Leverage $_{it}$	-63.365	0.000	Stable
$SIZE_{it}$	-46.089	0.000	Stable
ROE_{it}	-43.289	0.000	Stable

Chow Test (F-Limer)

In estimating the data panel model, we are faced with two general situations. In the first case, the y-intercept is the same for all sections, and here we are faced with a pool data method. In the second case, the y-intercept is different for all sections, which is called panel data. Chow test and F-Limer statistic are used to determine panel data methods and whether they are homogenous or heterogeneous. The statistical hypotheses of this test are as follows:

$$H_0 = \text{Pooled Data}$$

$$H_1 = \text{Panel Data}$$

Therefore, if the null hypothesis is rejected, the data panel method should be used. The results show the confirmation of the fixed effects against the aggregate least squares method (in other words, the confirmation of the panel data versus the pooled data), because the probability value is less than the standard value of 0.05%.

Table 6
Chow Test Results

Chow test		Statistic	Probability
Research model	Cross-section F	2.593	0.0000
	Cross-section Chi-square	4852.235	0.0000

Hausman test and selection of fixed or random effects

Hausman's method is used to determine the fixed or random effects for estimating models. If the calculated test statistic is greater than the table value, hypothesis H_0 is rejected and there is a correlation, so the fixed effects method should be used. The result of the Hausman test for the research model indicates the rejection of the null hypothesis. In other words, the results indicate the confirmation of fixed effects versus random effects, because the probability value is less than the standard value of 0.05%. Therefore, the model of this research should be estimated as a fixed effect.

Table 7
Hausman Test Results

Hausman test		Statistic	Probability
Research mode	Cross-section random	17.769	0.0000

Estimating and Interpreting Method of the Model

According to the results of F and Hausmann tests, we estimate the model by the method of generalized least squares (GLS) in the framework of cross-sectional weight regressions and taking into account the random effects. In general, the generalized least squares control the alignment between the residual statements.

Therefore, it can be said that for all t, s, j, i when $i \neq j, s \neq t$ we have:

$$E(\varepsilon_{it}, \varepsilon_{jt} | X_i^*) = \delta_i^2$$

$$E(\varepsilon_{is}, \varepsilon_{jt} | X_i^*) = \delta_i^2$$

$$E(\varepsilon_{is}, \varepsilon_{jt} | X_i^*) = \delta_i^2$$

The results of estimating the research models using the random effects method are presented in the table below. As the model determination coefficient shows, the independent variables were able to predict 96% of the dependent variable changes. In other words, the explanatory power of the model is 96%. The F-statistic and the related significance level and its comparison with the error level (0.000) indicate that the model is significant at the 99% confidence level. Durbin-Watson statistic is also equal to 1.67, which denies the existence of serial self-correlation (first-order) among the regression disturbance components. The rejection of serial self-correlation (first order) among the regression perturbation components indicates that the model regression coefficients and the coefficient of determination are not false. The results showed that there is no significant relationship between the characteristics of corporate governance (board independence, dual role of the CEO, and the number of board meetings) and abnormal operating cash flows at any of the significant levels ($p > 0.01$, $p > 0.05$, $p < 0.10$). The results also showed that there is a significant negative relationship between financial leverage and corporate earnings management because the probability value of this variable (0.02) is less than the standard value of 0.05. In

addition, it can be said that there is a positive and significant relationship between financial leverage, corporate governance, and profit management. Thus, it can be said that financial leverage can play a mediating role between corporate governance and profit management.

Table 8
Results of Panel Test

Abbreviation	Variable	Coefficient	t-value	Significance level
$DUAL_{it}$	The duality of the role of the CEO	0.001	0.75	0.44
$INDEP_{it}$	Independence of the board	-0.268	-1.65	0.135
$BMEET_{it}$	Number of board meetings	0.084	1.267	0.09
Financial Leverage _{it}	Financial Leverage	-0.451	-3.30	0.02
Corporate governance * Financial Leverage _{it}	Financial leverage * Corporate governance	-0.185	-2.59	0.000
$SIZE_{it}$	size of the company	-0.003	-2.94	0.015
ROE_{it}	Return on equity	0.014	1.83	0.067
$D.W = 1.67$ $probF = 0.0000$ $R^2 = 0.967$				

Conclusion and Suggestions

As mentioned, this study aimed to investigate the effect of corporate governance on the earnings management of companies listed on the Tehran Stock Exchange. This experimental research is conducted in an inductive-deductive way. Also, the research method for conducting the study is correlational. The results showed that there is no significant relationship between corporate governance and earnings management. The results also showed that there is a significant negative relationship between financial leverage and earnings management. In other words, there is an inverse relationship between financial leverage and abnormal operating cash flows (a measure of real profit management). The results also indicated that financial leverage can play a mediating role between corporate governance and earnings management. In general, as financial leverage increases, managers' motivation to manage real profits decreases. Increasing financial leverage, followed by pressure from debt contracts, can reduce the opportunity for

managers to engage in opportunistic behaviors, in other words, make them more cautious. On the other hand, earnings management can make some costs through manipulating real activities such as spending time and money that could be spent on productive activities.

Therefore, manipulating real activities can lead to a reduction in the future performance of the company. This reduces the motivation of managers to manage profits by manipulating real activities in companies with high financial leverage where the results of the company's performance are a significant issue for creditors. The results of this study are not in line with the results of Marzi Nodeh et al. (2021), Ghorbani, Kharkoshi and Masoumi (2021) and Falahatkar et al. (2021) studies. Because the concluded that here is a negative and significant relationship between corporate governance and profit management. However, the results of the research are in line with the results of the research of Zhou et al. (2021) and Subasinge and Kwalalatna (2021).

The results also showed that firm size has a significant negative relationship with abnormal operating cash flows. Also, the growth of the company shows a significant positive relationship with the level of absolute discretionary accruals. This suggests that a high-leverage firm is more likely to participate in earnings management when a firm is close to defaulting on debt agreements (Bartov, Gol, & Tsui, 2001; Davidson et al., 2005; Klein, 2002). In addition, the negative relationship between firm size and abnormal operating cash flows indicates that larger firms are more closely monitored by the market and other stakeholders, making it more difficult for them to participate in profit management. This finding is consistent with the findings of previous studies. The results also showed that there is no significant relationship between the rate of return on equity and earnings management. These results are in line with the results of research by Bartov et al. (2001); Davidson et al. (2005); Klein (2002); Park and Shin (2004); Rahman and Ali (2006) and Xie et al. (2003). According to the findings of the present study, the existence of debt contracts and increased external financing, or in other words, increased financial leverage can be a factor to limit the opportunistic behaviors of managers and reduce its adverse effects on corporate governance. Investors are also encouraged to consider the extent of financial leverage and debt contracts when evaluating companies and making investment decisions.

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