





## The effect of corporate governance system on the relationship between profit manipulation and investment efficiency using the autoregressive distributional lag (ARDL) model.

#### Morteza Hoseinalinezhad

Ph.D student in Accounting, Accounting Department, ghaemshahr Branch, Islamic Azad University, ghaemshahr, Iran. mortezahan20@gmail.com

#### Seyed Mohamad Hassan Hashemi Kucheksarai

Assistant Prof, Accounting Department, ghaemshahr Branch, Islamic Azad University, ghaemshahr, Iran, (corresponding Author).

Hasan.hashemi11@gmail.com

#### Ali Jafari

Assistant Prof, Accounting Department, ghaemshahr Branch, Islamic Azad University, ghaemshahr, Iran.
A.gafari@tse.ir

Submit: 15/08/2022 Accept: 19/10/2022

## **ABSTRACT**

Capital expenditures are considered valuable and important for the success of companies; Because the state and amount of these expenses indicate the state of the company in the future. Such decisions often create major financial obligations that are related to the long-term policies and policies of organizations and the manager's decisions about the type and amount of profit manipulation. The purpose of this research is to investigate the effect of corporate governance system on profit manipulation and investment efficiency. The statistical population of this research was the companies admitted to the Tehran Stock Exchange during the years 2015 to 2019. These samples included 150 companies that have characteristics such as data availability, publication of financial statements in the desired years by the stock exchange organization, etc. The results of the research showed that there is a negative and significant relationship between profit manipulation and investment efficiency, as well as a positive and significant relationship between corporate governance and investment efficiency in companies listed on the Tehran Stock Exchange. Also, the results showed that the corporate governance system has a significant effect on the relationship between profit management and investment efficiency in companies listed on the Tehran Stock Exchange in a way that reduces the negative effect of profit manipulation on investment efficiency.

#### **Keywords:**

corporate governance, profit manipulation, investment efficiency.

JFM4



#### 1. Introduction

One of the important information contained in the financial statements of companies is the accounting profit, which is considered as an indicator for measuring the performance of the company. Most financial analysts use this figure in stock price valuation models and economic enterprise performance evaluation (Lema et al., 2018). Investors also decide to keep or sell shares according to the level of profitability of the company. One of the factors affecting the profit is the correct and appropriate decision-making by the management in relation to capital expenditures. Decisions related to capital expenditures are influenced by the expected benefits of investment, which are aimed at the future growth of the company and product demand (Liu et al., 2021). The company's expectations about future growth status are based on revenue and accounting profit information. The real performance of the company is not shown by manipulating the accounting information and profit management, and as a result, future growth expectations are distorted more than the reality despite the income and accounting profit (Jabbarzadeh and Demirchi, 2018). Managers are aware of the existence of incorrect information in external reporting, but they may make extreme investments because of the managers' desire to run large companies (Liu et al., 2021). Also, managers who are worried about their reputation in the market may have incentives to take measures that improve their short-term performance but lead to long-term costs (Khamdi and Kazemi, 2017). In addition, the people who are involved in making capital expenditure decisions may not be aware of the manipulation of accounting information and give wrong advice in this regard to managers and board members (Liu et al., 2021). Some studies have investigated the consequences of profit manipulation on external organizational decisions such as stock market prices and access to foreign financing, and some internal researches have investigated the factors affecting investment decisions, the causes of overinvestment, and the relationship between capital decisions and free cash flow, but few studies have investigated the consequences of profit management on internal organizational decisions and its efficiency, or explained the role of information quality in the company's investment efficiency and the level of external financing (Ajia et al., 2015).

There are different views regarding profit manipulation. In this regard, Baharmghaddam and Kohi (2009) state that an important aspect of the established accounting standards and its process with existing company management structures is to provide flexibility and personal judgment for managers. Some of the authority and personal judgments in reporting enable the managers to reliably transmit their private information to the shareholders; Such use of discretion and personal judgment indicates profitable management. On the other hand, the problem with applying personal judgments and discretion in financial performance reporting is that managers may use this ability to prevent the transmission of information about potential poor current or future performance. Such behavior in reporting reduces the informative aspect of profit and indicates opportunistic profit management; However, the results of their research indicate the trend of profit management towards efficiency in Tehran Stock Exchange.

In this regard, some may argue that if the managers want to show a favorable image of the business unit to the investors through the reports they provide, they will not allow this information, the internal decisions of the company, including the decisions influence its investment. However, it is possible that the internal decision-makers of the company, due to reasons such as excessive optimism or ignorance of the misrepresentation of information, believe in the growth trend presented in an incorrect manner, and based on this, the decision (Namazi et al., 2017). It is also possible that the internal decision-makers of the company understand the real situation of the company and in order to improve its unpleasant performance, they invest more with a high risk-taking approach. In fact, some of the defects of the capital market, such as information asymmetry and agency costs, can lead to the process of over-investment or under-investment. In the sense that not all projects with a positive net present value should be carried out, which means that under-investment should take place, and not all projects with a negative net present value should be rejected, which means that over-investment should take place (Datta et al., 2014).).

In the last decade, the country's capital market has witnessed extensive changes. The number of companies active in the capital market, representatives and other components of the capital market has increased and therefore the structure of the country's

market has changed compared to the past (Wang et al., 2015). The country's capital market needs fundamental implementation to pave the way for the development of this industry. Corporate governance is known as an influential factor in the development of this industry, which includes the principles based on which transparency, fairness, respecting the rights of all stakeholders, responsibility and accountability are observed in companies active in the capital market (Tane and colleagues, 2019). It is believed that corporate governance mechanisms help investors in stimulating and forcing management elements to use company resources more efficiently in order to fulfill their stewardship duties. Management elements play a vital role in the use of resources by making favorable decisions about optimal investment. Inefficient investment policies can be the result of weak corporate governance. In other words, corporate governance is a key supervisory and control factor in efficient management and investment efficiency (Meshki et al., 2017). According to the above explanations, this study investigates the effect of corporate governance system on the relationship between profit manipulation and investment efficiency of companies listed on the Tehran Stock Exchange and answers the question whether corporate governance system Does the relationship between profit manipulation investment efficiency of companies listed on the stock exchange have a significant effect?

## 2. Research background

In a research, Miran and Chavoshi (2019) examined the impact of corporate governance on the behavior of investors in the capital market. The obtained results indicated the confirmation of all hypotheses regarding the effect of corporate governance in structural, relational and cognitive components on the behavior of investors in the corporate capital market. Also, according to the obtained results, the structural dimension with 0.81 had the greatest impact on the behavior of investors in the capital market.

Jabarzadeh and Demirchi (2018) investigated the effect of the type of company ownership on the relationship between profit management and audit fees in companies listed on the Tehran Stock Exchange. The time period of the research was 1384-1394 and 99 companies were selected as samples. The dependent variable used in this research is profit management based on adjusted Jones, Kotari and Kaznik indices,

independent research variable, audit fee, and the moderating variable of the type of corporate ownership (institutional ownership) has also been used. The research findings show that company ownership has a positive and significant effect on the relationship between profit management and audit fees in companies listed on the Tehran Stock Exchange.

Darabi and Azhdari (2017) investigated the relationship between corporate governance and real profit management of companies listed on the Tehran Stock Exchange. In order to conduct the research, 62 companies were selected in the Tehran Stock Exchange during the years 1390 to 1394 to test the hypotheses. The research results indicate that corporate governance has a direct and significant relationship with real profit management. The results also show that there is a significant positive relationship between the presence of women among the members of the board of directors and the actual management of profit.

Khamedi and Kazemi (2017) investigated the effect of institutional environments on the relationship between profit management and capital structure in companies. A statistical sample consisting of 92 companies admitted to the Tehran Stock Exchange during a 7-year period from 1388 to 1394 was tested using multiple regression models. The findings showed that companies with a higher level of profit management have a higher financial leverage. Also, institutional environments do not have a significant effect on the relationship between earnings management and capital structure.

Muradzadeh Far et al. (2013) in a research entitled the effect of board of directors' remuneration and institutional ownership on profit management in companies listed on the Tehran Stock Exchange, investigated the relationship between board of directors' remuneration and institutional ownership with profit management, which through items An optional obligation is considered, paid. In this research, Jones' modified model is used to measure profit management. The results of the research by applying the random effects combined data test show that there is a negative relationship between institutional stock ownership and profit management; In other words, as the percentage of institutional ownership of shares increases, the company's flexibility to manage accruals decreases. In addition, the results indicate that there is a direct relationship between the remuneration of the board of directors and profit management.

Avesta (2010) in a research entitled the relationship between ownership structure and profit management, investigated the effect of ownership structure in four classes of institutional, corporate, managerial and foreign ownership on the profit management of companies listed on the Tehran Stock Exchange during the years 1383-1387. Is. The research results show that there is a significant negative relationship between institutional ownership and managerial ownership with profit management, but there is a positive and significant relationship between corporate ownership and profit management.

Liu et al. (2021) investigated the effect of profit management on investment efficiency in a research. This research applied the threshold model proposed by Hansen (1999) and found that companies that manage earnings can over- or under-invest, depending on the level of the companies' stock returns. The results of the study showed an inverse relationship between earnings management and corporate investment, which changes from negative to positive as stock returns increase beyond certain threshold levels. Also, the results showed that the level of stock returns affects whether managers use actual and accrual manipulations jointly or as alternatives to influence corporate investment.

In a research entitled debt structure, corporate governance and profit management, Tane et al. (2019) investigated the impact of debt structure and corporate governance on the profit management of companies located in emerging economies. The results of the research showed that the debt structure and corporate governance have a significant effect on the profit management of companies located in emerging economies.

Lema et al. (2018) investigated the effect of institutional ownership and product market competition on profit management in a research entitled institutional ownership, product market competition and profit management. Profit management is the dependent variable and the variables of institutional ownership and competition in the product market are the independent variables of the research. In this article, McNichols accruals are used as profit management and Herfindahl's index is used for the competition variable in the product market. The results of the research showed that institutional

ownership and competition in the product market had a significant effect on profit management.

In a research, Jehoun and Nishihara (2015) studied the impact of debt maturity and corporate governance on the investment decisions of companies. The findings of the research showed that short-term debt maturity increases performance, but long-term debt maturity increases the expected cash flow and decreases performance, and finally, corporate governance improves the investment process.

## 3. Research Hypotheses

According to the background and research studied and using the literature presented in the current research, the hypotheses of this research are formulated as follows:

**First hypothesis:** There is a relationship between profit manipulation and investment efficiency in companies listed on the Tehran Stock Exchange.

Second hypothesis: There is a relationship between corporate governance and investment efficiency in companies listed on the Tehran Stock Exchange.

The third hypothesis: the corporate governance system has a significant effect on the relationship between profit management and investment efficiency in companies admitted to the Tehran Stock Exchange.

#### 4- Research Methodology

# 4-1- Specification of the model and description of the variables

Due to the fact that this research uses past information to test hypotheses, it is a post-event type of research. According to the purpose of the research, from the following model which is taken from the research of Liu et al. (2021); It is used for analysis.

$$INV_{it} = \beta_0 + \beta_1 EM_{it} + \beta_2 CG_{it} + \beta_3 EM_{it} *CG + \beta_4 Size_{it}$$

$$+ \beta_5 ROE_{it} + \beta_6 MB_{it} + \beta_7 LEV_{it} + \epsilon_{it}$$

INV: indicates the or efficiency of investment calculated using the following model.

$$I = \beta_0 + \beta_1 * CFO/FA_{t\text{-}1} + \beta_2 GO + \epsilon_I$$

In the above equation, I represents the company's investments, which are shown in the company's financial statements (change in tangible fixed assets or change in total assets or change in non-current assets

or change in investment). long term); It is extracted. Also, GO indicates growth opportunities (the ratio of book value to the market value of equity), CFO indicates cash flows resulting from business unit operations, and FA also indicates fixed assets. The growth opportunity is also derived from the Q-Tobin equation. In this model, EI represents the amount of investment that is not explained by growth opportunities. These error values may be positive or negative. Positive error values are overinvestment and negative values are called underinvestment. In this research, the standard deviation of error values multiplied by negative one is considered as the level of investment efficiency. This means that the higher this standard is, the higher the efficiency of the investment.

EM: refers to profit manipulation or management based on accruals, which is used according to the McNichols (2002) model:

$$\begin{split} TA_{i,t} / A_{i,t-i} &= \alpha_s \left( i / A_{i,t-i} \right) + \alpha_s \left( \Delta REV_{i,t} / A_{i,t-i} \right) + \alpha_s \left( PPEi, t / A_{i,t-i} \right) \\ &+ \alpha_r \left( CFO_{i,t} / A_{i,t-i} \right) + \alpha_s \left( CFO_{i,t-i} / A_{i,t-i} \right) + \alpha_s \left( CFO_{i,t-i} / A_{i,t-i} \right) \\ &+ \epsilon_i, \end{split}$$

where in;

TA: difference between operating profit and operating cash flows

Ai.t: Total assets at the beginning of the period of company i in period t

REVi,tΔ: change in sales revenue minus change in accounts receivable of company i in period t

Salesi,t∆: changes in sales

PPEi,t: property, machinery and equipment of company i in period t

CFOi,t: operating cash flow of company i in period t CFOi,t-1: operating cash flow of company i in period

CFOi,t+1: operating cash flow of company i in period t+1

CG: It is an indicator of the corporate governance system, which uses the following variables (intraorganizational criteria of corporate governance):

- 1) Influence of the CEO (CEOD): If the chairman of the board of directors is a member, it is equal to one and otherwise it is equal to 0.
- 2) The size of the board of directors (BRDSIZE): the number of members of the company's board of directors

- 3) Independence of the board of directors (BRDIND): It is the ratio of non-obligatory directors to all members of the board of directors.
- 4) The size of the audit committee (AudCom): the number of employees of the company's audit committee
- 5) Ownership concentration (OWNCON): The total ownership percentage of shareholders who own at least 5% of the company's shares.

whose equation is as follows:

$$CGO_{it} = \sum_{j=1}^{5} corporate \ governace \ mechanism_j$$

For the variables that are in the form of ratio or percentage, after calculating these variables for each company, an average is prepared for each variable from all relevant samples during the period under review, if any of the calculated variables For each company in each period, the average calculated for all samples related to that variable should be greater in all periods; That variable will be equal to 1 and equal to 0 otherwise.

After identifying the variables, the company's leadership ability is calculated as follows:

GOVINDEX =
$$(\sum d_i)/(\sum H_j)$$

In this regard, di refers to all the items that have received a score of one, and Hi refers to all the items that have zero or one values. In this way, for each company, the measured corporate leadership ability index is in the range of zero to one. This approach has been used in the research of people such as Wallace, Cook, Ahmed and Nichols, Sajjadi et al., Nikumram and Mohammadzadeh.

LEV (Financial Leverage): It is obtained by dividing total liabilities by total assets.

SIZE (company size): is the natural logarithm of equity.

ROE (return on equity): It is obtained by dividing the company's profit by the equity.

MB (the ratio of market value to the book value of equity): It is obtained by dividing the market value by the book value of equity.

## 4-2- Population and statistical sample

The statistical population of this research is the companies admitted to the Tehran Stock Exchange for a period of 5 years from 2015 to 2019. These examples include companies that have the following characteristics:

- 1) The companies in question must be members of the stock exchange from the beginning of 2015 to the end of 2019.
- 2) The end of their fiscal year is March 29.
- 3) Do not stop operations or change the financial period during the period under review.
- 4) Their financial statements have been published by the stock exchange organization in the years in question.
- 5) The data they want is available.
- 6) There is no change in the financial year during the period under review (2015-2016).
- It should not be a part of financial companies, investment companies or financial intermediary companies.

It is a systematic elimination sampling method, according to the above considerations, a number of companies in the statistical community were selected as samples. Based on this, there are 150 companies from the statistical population in the adjusted society.

## 4-3- Information analysis method

To analyze the data, the autoregressive model with distribution breaks (ARDL) was used. Most of the recent studies point out that the ARDL model is superior to other common methods such as the Engel and Granger method for investigating cointegration. The first reason is that it can be used regardless of whether the variables in the model are (0)I or (1)I. Another reason is that this method is relatively more effective in small or limited samples compared to other methods. Therefore, this method was used in this study. It should be kept in mind that the ARDL method cannot be used in the presence of (2)I. The general form of the ARDL pattern (p, q1, q2,..., qk) can be expressed as follows (Mohammedzadeh et al., 2012).

$$\begin{split} & \varphi(L,P)Y_t = \sum_{i=1}^k \beta_i(L,q_i)X_{it} + \delta W_t + \mu_t \\ & Q(L,P) = 1 - \varphi_1 L - \varphi_2 L^2 - \dots - \varphi_p L^p \\ & \beta_i(L,q_i) = \beta_{i0} + \varphi_{i1} L - \varphi_{i2} L^2 + \dots + \beta_{iqi} L^{qi} \end{split}$$

In the above relationship, L represents the firstorder time interval operator, so that LY=Y\_(t-1), represents the dependent variable, X\_it represents the vector of explanatory variables, q\_i is the number of optimal intervals related to each of the explanatory variables, P is the number The optimal interval related to the dependent variable and W\_t is a vector of deterministic variables such as latitude from the origin, seasonal variables, time trends or exogenous variables with fixed intervals. The above equation is estimated using Eviews10 software. In the next step, using one of the criteria of Akaike, Schwartz-Baysin, Hanan-Quinn or adjusted coefficient of determination, the optimal intervals of the model are selected. From the above criteria, Pesaran and Shin (1998) suggest the Schwartz-Bayesian criterion to determine the optimal intervals of the model. Considering the small size of the sample, this measure saves the number of interruptions so that fewer degrees of freedom are lost (Haidari, 2013).

To detect the long-term relationship, the value of t statistic can be compared with the critical quantities provided by Banerjee, Dolado and Master (1992). The value of the t statistic for testing the hypothesis of the existence of a long-term relationship  $(H_0:\sum_{i=1}^{\infty}(i=1)^{\hat{p}_{i}}\phi_{i} -1\geq 0)$  is calculated as follows (Sultan Tuye et al., 2013):

$$t = \frac{\sum_{i=1}^{p} \hat{\beta}_i - 1}{\sum_{i=1}^{p} S_{\widehat{\beta}_i}}$$

where  $S_{-}(\beta_{-}i)$  is the standard deviation of the coefficients of the dependent variable intervals. If the calculated t statistic value is greater than the critical value, the null hypothesis of no long-term relationship is rejected and the existence of a long-term relationship is accepted. In addition, Eviews10 software provides an error correction model (ECM) according to the selected model. In order to derive the error correction model based on the ARDL (p,q\_1,q\_2,...q\_k) model, the variables W\_t, Y\_t, X\_1t,..., X\_kt are considered in terms of values with a break and their first order difference, and the model ECM results in the following relationship (Haidari, 2013).

$$\begin{split} \Delta Y_t &= -\varphi(L, P)ECM_{t-1} + \sum_{i=1}^k \beta_{i0} \Delta X_{it} + \delta \Delta W_t - \\ \sum_{i=1}^{p-1} \varphi^{\texttt{D}}_{i} \Delta Y_{t-i} - \sum_{i=1}^k \sum_{i=1}^{q_{t-1}} \overline{\beta}_{ij} \Delta X_{i,t-j} + U_t \end{split}$$

The above equations are estimated by OLS method and by performing the necessary tests, the short-term dynamic structure of the model is determined. In the error correction model, [ECM] (t-1) indicates the speed of adjustment towards long-term equilibrium. This coefficient shows what share of the imbalance of the dependent variable Y\_t during the previous period is corrected in the current period. It is expected that the sign of this variable is negative and its value is between 0 and -1.

## 5. Research findings

Before testing the research model to determine the relationship between the research variables, the unit root test for the variables should be performed. In this research, Lin and Chu's method has been used in order to test the root of the tabular unit. The null hypothesis in this test indicates variable inconsistency. In this case, if the probability values are less than 0.05, the null hypothesis will be rejected. The results related to Manai for panel data are presented in the table below.

Based on the obtained results, all the variables are at significance level because the probability values of all variables are less than 0.05 and the null hypothesis which is based on non-significance will be rejected. To estimate the research model, the optimal model selection test is performed. In order to determine the optimal interval, Schwater-Baysin criterion has been used, the results of which are presented in Table (2).

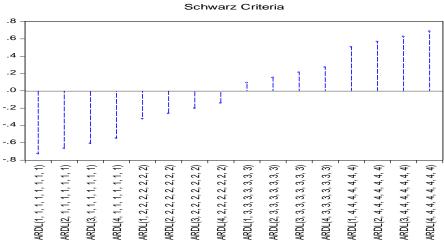
According to the results of the above test, the optimal model can be determined to determine the relationships of the selected variables. The optimal interval for the research model is (1, 1, 1, 1, 1, 1, 1) and the numbers from left to right respectively indicate the number of intervals of 1 for the third sentence and variables of profit manipulation and management. Corporate, interactive effect (corporate governance\* profit manipulation), financial leverage, company size, return on equity and the ratio of market value to book value. In order to confirm the robustness of the selected model, a diagram showing the preference of optimal models over other self-explanatory modes is given below:

Table (1). Manay test results for model variables

Variable	Symbol	The coefficient	Possibility
The investment efficiency	INV	-9.43	0.0000
Profit manipulation	EM	-12.59	0.0000
Corporate Governance	CG	-6.39	0.0000
Financial Leverage	LEV	-9.81	0.0000
size of the company	SIZE	-14.04	0.0000
Returns	ROE	-11.21	0.0000
The ratio of market value to book value	MB	-5.38	0.0000

Table (2) Ontimal model selection test

Variable	The coefficient	Possibility
Fixed sentence	0.56	0.2175
First -order interruption of profit manipulation	-0.09	0.2876
First order interruption	0.06	0.0000
First -order interruption (corporate leadership* profit manipulation)	0.11	0.0412
First -order interruption	0.02	0.0659
The first order interruption of the company size	-0.05	0.0328
First -order interruption	-0.027	0.1763
First -order interruption of market value -to -book value ratio	-0.102	-0.0894
Optimal model interruption	(1.1.1.1.1.1.1)	



Since the chosen criterion for determining the optimal intervals of the model is Schwarter-Baysin and also, the basis of the Schwarter-Baysin criterion is on the large absolute value of this criterion, therefore, by using this criterion, some of the best modes of selection The optimal interval is drawn, for example, the interval (1,1,1,1,1,1,1,1) with the value of the statistic (-9.83) over the intervals (2,1,1,1,1, 1, 1, 1), (3, 1, 1, 1, 1, 1, 1) and other intervals, with a criterion value less than -5.42 is preferable. With these interpretations, the long-term relationships between the research variables are estimated by selecting the optimal models.

To detect the long-term relationship, the value of t statistic can be compared with the critical quantities provided by Banerjee, Dolado and Master (1992). The result of the calculation statistic t in the research model is equal to -4.93 and because it is greater than the critical value of Banerjee, Dolado and Master (-3.28) in terms of absolute value, therefore the null hypothesis that there is no long-term relationship is rejected in favor of the opposite hypothesis. . The results of long-term and short-term relationships of variables are presented in the following table:

Table (3) The results of the research model test

Variable	The coefficient	Possibility		
Long -term effect				
Profit manipulation	-0.15	0.0358		
Corporate Governance	0.08	0.0094		
Corporate Leading* Profit Manipulation	-0.06	0.0000		
Financial Leverage	0.039	0.1951		
size of the company	-0.028	0.0341		
Returns	-0.054	0.0941		
The ratio of market value to book value	-0.023	0.7318		
Short -term effect				
First -order interruption of profit manipulation	-0.052	0.00383		
First order interruption	0.017	0.0298		
(First -order interruption (corporate leadership* profit manipulation	-0.011	-0.0007		
First -order interruption	0.015	0.2177		
The first order interruption of the company size	-0.019	0.0984		
First -order interruption	-0.016	0.6316		
First -order interruption of market value -to -book value ratio	-0.009	0.1222		
Fixed sentence (c)	0.18	0.0000		
ECM	-0.829	0.0000		

The coefficients of the regression model listed in table (3) show that there is a negative relationship between profit manipulation and investment efficiency of the companies accepted in the Tehran Stock Exchange market. In other words, the coefficient related to the variable of profit manipulation, which shows the number -0.15, indicates that by increasing the condition of profit manipulation by one unit, it is possible to improve the investment efficiency of the companies accepted in the market. Tehran Stock Exchange decreased by 0.15%. Also, considering that the significance level is less than 5%, this relationship is reliable and meaningful. Therefore, it can be said that profit manipulation has a significant effect on the investment efficiency of companies admitted to the Tehran Stock Exchange. Also, the estimation of the model shows that there is a positive relationship between corporate governance and investment efficiency of companies listed in Tehran Stock Exchange. In other words, the coefficient related to the corporate governance variable, which shows the number 0.08, indicates that by improving a corporate governance unit, it is possible to increase 0.08% in the investment efficiency of companies admitted to the Tehran Stock Exchange. . Also, considering that the significance level is less than 5%, this relationship is reliable and meaningful. Also, the interactive effect of corporate governance and profit manipulation shows that corporate governance has a significant effect on the relationship between profit manipulation and investment efficiency of companies listed on the Tehran Stock Exchange in a way that reduces the negative effect of profit manipulation on efficiency invested. In the following, the error correction model (ECM) has been used to investigate how the short-term imbalance in the pricing of capital assets is carried out towards the long-term equilibrium. The ECM coefficient shows that in each period, how many percent of the short-term imbalance is adjusted to reach the long-term balance. Based on the results, the ECM coefficient is equal to -0.82 and considering that the significance level of the coefficients is less than 0.05%, it is significant. This figure shows that in each period 82% of the short-term imbalance of investment efficiency is adjusted to reach the long-term balance; Therefore, it can be said that the adjustment towards balance is done relatively quickly.

#### 6. Conclusion

The results showed that there is a negative and meaningful relationship between the manipulation of profit and the efficiency of the investment of companies accepted in the Tehran Stock Exchange, which in line with the findings of Mc Nicoles and Staben (2008), Codia And Philippone (2009) is Cohen and Ghana (2009) and Pourhydari et al. (2013). The existence of this relationship can be required by managers to coordinate the reported profit and the amount of investment, in order to prevent the discovery of manipulation of profit. Codia and Philippone (2009) also acknowledge that managers have no specific priorities for capitalism; But marking requirements force them to behave in harmony. The main point is that in any marking balance, investment must be in line with the reported profit. On the basis of numerous interpretations, this relationship can be attributed to the misleading symptoms provided by the financial statements of the decision -makers and provides the decision -making decisions to make rough investment decisions. It comes. On the other hand, it is possible for those who are aware of the realistic status of the company through profit management and seek to improve the real performance of the company in the next financial period by high risk approach.

The results showed that there was a positive and meaningful relationship between corporate leadership and the efficiency of the investment of companies accepted in the Tehran Stock Exchange. The interactive effect of corporate leadership also shows that corporate leadership has a significant effect on the relationship between profit manipulation investment efficiency of companies accepted in Tehran Stock Exchange so that reducing the negative effect of profit manipulation on efficiency. It is invested. It is worth noting that these results are incompatible with the evidence in Shellfar (2017), Luxemana and Yang (2016), Data et al. (2015) and Carona and colleagues (2015). According to existing theoretical foundations, with increasing transparency of information and reducing information asymmetry between company and investors and creating solutions to reduce the unequal distribution of information among users, information is provided publicly and completely available in information environment. Transparency, improper selection, and unnecessary decisions of managers in investment projects are reduced and will ultimately improve investment efficiency. According to existing theoretical foundations, the terms of the corporate sovereignty are appropriate and quality with the corporate board. An effective board of directors can be very effective in achieving good corporate sovereignty and consequently in protecting the interests of stakeholders, especially the owners of the company. On the other hand, evaluation and decision making with managers are with managers. Therefore, with the effective board of directors, managers will make optimal decisions and the company's investments will be effective. When the company and its executives are more responsive to institutions and stakeholders, especially shareholders, and are at the center of others, they make better decisions, resulting in the strengthening of the corporate sovereignty system through attention. More than shareholders' rights and ultimately the investment of corporate investments, which is the financial resources of corporate investment, funds provided by shareholders. According to the results of the study, it is suggested that the costs of manipulating profit for managers should be explained and the formulation of standards to provide better quality information should be made to respond appropriately to the needs of the community. Capitalists and analysts are also recommended to consider the quality of accruals in their decision-making assessments and models. Although the results of the research showed that the corporate leadership system has a significant relationship with corporate investment-efficiency, it is suggested to the Stock Exchange that the Companies, in the presence of the Corporate Regulations of 2007, and the Corporate Regulations approved in 2007. The necessity of its implementation since 2008, by providing related infrastructure in the sense of investing in the world (establishment of corporate sovereignty rating companies as one of these infrastructures can be one of these infrastructures. Provide adequate conditions for promoting the principle of corporate sovereignty for stock companies) on the basis of corporate sovereignty so that by providing other relevant information, the assurance of investors for more investment in corporate stocks. And other participants in the stock exchange have been planned to maintain or increase their investment efficiency at the present level by directing resources to companies with higher corporate governance and making optimal investment decisions by companies. . In addition, the managers and officials of the Stock Exchange are offered to reducing information asymmetry, increase the quality of the corporate governance system, and improve the investment efficiency, while making efforts to provide guidance and recommendation in order to better and more accurately apply the corporate leadership regulations, they have more supervision in its implementation. The results of this study raise awareness of investors and managers and are suggested to always consider the relationship between corporate governance and investment efficiency and strive to form a stronger relationship between them to prevent the waste of little economic resources. Considering the effect that profit manipulation has on the formation of inefficient investment of companies, if the users of financial statements can understand the application of upward (downward) profit management through the manipulation of real activities. , they should be concerned about the possibility of more (less) investment in the target company in order to be guided to more logical decisions. In other words, investors and creditors can make decisions about whether to provide their resources to companies or not, as well as how much resources and under what conditions this will be done benefit from the results of this research. Also, it is appropriate for the auditing organization and other legislative and regulatory institutions to pay more attention to the category of profit manipulation in the compilation of accounting standards and financial laws and by providing the necessary guidelines (to limit managers in the practice of profit management), use To help users of financial information in order to make optimal and informed decisions.

## References

- Avesta, Sohrab, Investigating the Relationship between Property Structure and Profit Management, Financial Accounting Research, Volume 3, No. 2.
- Jabarzadeh, Saeed, Damirchi, Asghar, 1398, Investigating the Impact of the Company's Ownership on the Relationship between Profit Management and Audit Corporations in Companies Listed in Tehran Stock Exchange, Journal of Accounting and Auditing Research, Vol. 11, No. 42.
- 3) Khary, Sima, Kazemi, Hossein, Investigating the Impact of Institutional Environment on the

- Relationship between Profit Management and Capital Structure in Companies, Financial Accounting Knowledge, Volume 5, No. 4.
- 4) Darabi, Roya, Ajdari, Fatemeh, 1397, Investigating the Relationship between the Lamin System and the Audit Properties with the Real Profit Management of Companies Listed in Tehran Stock Exchange, Journal of Accounting Research, Volume 8, No. 2.
- 5) Moradzadeh Far, Mehdi, Zarezadeh, Mohammad Sadegh, Tucker, Reza, The Impact of Board of Directors and Institutional Property on Profit Management in Companies Listed in Tehran Stock Exchange, Securities Exchange, Vol. 5, No. 18.
- 6) Black, Mehdi, Kheradiar, Sina, Hassanzadeh, Naghmeh, 1977, Investigating the Relationship between Cost Strategy Strategy, Market Competition and Real Profit Management in Companies Listed in Tehran Stock Exchange, Accounting Advances, Volume 10, Issue 1.
- 7) Miran, Sarasadat and Chavoshi, Seyed Kazem, 1399, The Impact of Corporate Governance on Investors' Behavior in Capital Market, Third National Conference on Science and Technology of the Third Millennium Economics, Iran Management and Accounting, Tehran.
- 8) Namazi, Mohammad, Hajji, Zohreh, Chenari, Hassan, 1396, The Impact of Debt Maturity Structure on Profit Management Based on Accredited Items, Journal of Financial Accounting and Auditing Accounting, Volume 9, No. 34.
- 9) Ajay, R., & Madhumathi, R. (2015). Institutional ownership and earnings management in India. Indian Journal of Corporate Governance, 8(2), 119-136.
- 10) Datta, S., Iskandar-Datta, M., & Singh, V. (2014). Product market power, industry structure, and corporate earnings management. Journal of Banking & Finance, 37.
- 11) Jeon, H., Nishihara, M., (2015), "The Effect of Business Cycle and Debt Maturity on a Firm's Investment and Default Decisions", International Review of Economics & Finance, Accepted Manuscript.
- 12) Lemma, T., Negash, M., Mlilo, M., Lulseged, A., 2018, Institutional ownership, product market competition, and earnings management: Some evidence from international data, Journal of

- Business Research. www.elsevier.com/locate/jbusres.
- 13) Liu, S., Lin, S., Sun, Z., Yuan, L., (2021), Earnings management and firms' investment behavior: The threshold effect of ROE, Emerging Markets Review, 47(1), 1-15.
- 14) Thanh, S. D., Canh, N., Thai, N. R., 2019, Debt Structure and Earnings Management: A Non-linear Analysis from an Emerging Economy, Finance Research Letters. https://doi.org/10.1016/j.frl.2019.08.031.
- 15) Wang, H., Li, Q., & Chen, Y. (2015). Earnings management, business cycle, and product market competition. China Journal of Accounting Studies, 3(2), 136-157.