



Research Paper

## The Effect of CEO Power on Stock Price Delay

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### ABSTRACT

News and information are rapidly reflected on stock prices in the capital market. However, some factors prevent the stock market to reach its intrinsic value. The present study aimed to investigate the effect of CEO power on the stock price delay of the listed companies in Tehran Stock Exchange (TSE). To measure the CEO power, six criteria were determined based on the research by Lisic et al. For this purpose, the data of 107 companies in TSE during 2011-2018 were analysed. The regression model used in this research was assessed using panel data with the fixed effects approach. The results showed that CEO power has a negative and significant impact on stock price delay. In addition, powerful executives have more independence and play a more supervisory role over the board of directors, which reduces the infringement of stakeholder rights and lowers the agency costs. Lower agency costs decrease information asymmetry and financial information transparency, thereby reducing the stock price delay.

## 1 Introduction

In a favorable capital market, where investors make rational decisions and have complete information about the assets being traded, information is rapidly reflected on stock prices. Several studies [3, 6] have shown a lack of complete information in the market. In order to innovate in the current research, six criteria were determined to measure the CEO power, including CEO salary, dual duty, stock ownership, enterprise, number of positions, and number of years and. Some of these factors have been commonly used in similar articles. If some criteria are used, the correct answer cannot be expected. Incomplete and ambiguous information affects stock prices less quickly and prevents the detection of stock prices in a timely manner [9, 49]. CEO structural power significantly improves a bank's overall profitability, risk-taking ability, lending quality, and CEO power ownership [22]. Price adjustment is the process of reflecting information on stock prices through which the trading price of a stock moves toward its true value [4]. Stock price adjustment speed refers to the time it takes for information to be reflected on the stock price until it reaches its true value. In fact, stock market prices are a guide to the inflow of cash into companies. Therefore, prices must reflect the intrinsic value of the share, so that pricing efficiency (i.e., when stock price equals its intrinsic value) would increase in case of information efficiency [34].

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The CEO power to increase the likelihood of stock price crash risk is significantly mitigated when the percentage of the female directors and ownership by block holders and institutions is high within firms [50]. Information efficiency is when there is no interruption in the dissemination of access to information [43]. Operational efficiency is another prerequisite for pricing efficiency. According to the operational efficiency theory, transactions should be done at the lowest possible cost as the high cost of transactions prevents fast and accurate price adjustments. Delays in price adjustment are equally risky for the buyer and seller due to the lack of the full reflection of the information in the stock price. Therefore, the complete and immediate reflection of information may have positive or negative effects on the share price. By this choice, the buyer and seller expect to take only the risk, which may lead to distortion. The phenomenon of stock price adjustment has several determinants, the most important of which are incomplete information [44], information asymmetry [13], short selling limits [27], taxes [12], the liquidity and quality of accounting information [8], and noise traders [45]. The study conducted by Maristi (2002) confirmed the overreaction of prices to the entry of new information into the market within the first days, the differences in price adjustment coefficients in various companies, and the lack of a significant association between the size of the company and the price adjustment coefficient. On the other hand, Hou and Muskowitz [25] reported that the delayed response of the stock price is inversely correlated with the analytic power of the shareholders and stock liquidity. Callen et al. [8] also observed a negative correlation between the quality of accounting information and the delays in stock price adjustment. The results of the study conducted by Lee et al [29] indicated that the rate of stock price adjustment in Taiwan Stock Market has an asymmetric behavior, and the rate of stock price adjustment is faster in case of good news than bad news.

According to Sun and Yu [47], in the companies with a more independent board of director, the stock price adjusts more rapidly and reacts to new information with less delay. Gordon and Wu [21] also showed that when information asymmetry is more significant, stock prices adjust and react to the available information with more delay. Furthermore, the better quality of the disclosure of corporate information was reported to reduce information asymmetry and delayed stock price responses. Eom [15] also found that the higher percentage of ownership and volume of trades in a company's stock executed by foreigners is associated with greater delays in the reaction of the company's stock price. In Iran, Mehrara and Abdoli [33] stated that the effect of good and bad news on future price fluctuations is the same, which was attributed to the slowness of the information flow and immaturity of Tehran Stock Exchange (TSE). Also, Rahmani et al. [39] claimed that in the companies whose unexpected profit is lower and the quality of the accruals is higher (substitute for quality of disclosure), stock prices react to information faster. Ebrahimi Kordler et al. [14] also stated that in more conservative companies, stock prices react to bad news more rapidly than to good news. Javanmard and Pourmousi [24] also measured the quality of financial reporting with the substitute variable of accrual quality, observing that the rate of stock price adjustment in the companies with high and low reporting quality was not significantly different. In addition, Pourzamani and Ghamari [38] claimed that in TSE, the rate of the delayed reaction of stock prices to bad and good news was not significantly different. Yeganeh and Omidy also found that higher accrual quality and information content of earnings was associated with lower delays in the stock price response. Khodamipour et al. [8] reported that the correlation between the quality of earnings and delays in stock price adjustment is not significant. According to the studies conducted in Iran regarding stock price delays, it is clear that the effect of managerial factors (e.g., CEO power) on stock price delays has not been widely researched, and the impact of CEO power on corporate stock price delays has been largely ignored in academic research. A study in this regard was conducted by

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Adams et al. [1] who reported that in the companies where the CEO has significant decision-making power, stock returns were more volatile. In another study, it was stated that CEO power increased the variability of the company's performance. The aforementioned studies have certain limitations; first, they are conducted in the context of the developed market without considering the institutional and economic adjustments that may influence the CEO's decision. Second, they merely consider corporate risk when it comes to the impact of CEO power on performance variability. Finally, most of the studies that are focused on CEO power have measured the power from the perspective of CEO duality, ignoring other dimensions of power. Our study was performed to bridge the gap in the current literature by various measures. First, it was argued that CEO power does not solely stem from their formal position (structural power) or ownership power. In addition to the structural power of the CEO, we followed Finkelstein [18] to measure the power of the CEO, ownership, expertise, and prestige altogether. Recently [17], Faccio et al [16] stated that the age and gender of the CEO also affect the performance of companies. Therefore, we considered the tenure of the CEO as a personality criterion of the CEO. In the present study, the power of the CEO was measured using multidimensional sources. Attention to the power of the CEO and stock price delays could guide investors, while its disregard may confuse investors in their long-term investment decisions. Given the importance of investment and the stock market in the national economy, the effect of CEO power on stock price delays was investigated in this article. These features change the stock price delay due to their effect on the transparency of the financial reporting environment, reducing information asymmetry, and the quality of company disclosures. Overall, the objective of the current research was to investigate the effect of CEO power on the stock price delays of the companies listed on TSE. Six criteria were used to determine the power of the CEO.

## 2 Literature Review

The impact of CEO power on company outcomes has been discussed previously. In some companies, the CEO focuses their power on the important decisions that greatly affect the future of the company. It is especially common in large corporations with a complex distribution of power among the members, while in other companies, such decisions are based on the distribution of power among the senior executives through voting ("*Which decision-making process is better for the company?*" or "*Is it a good idea to give the CEO full decision-making power for all the important decisions of the company?*") To address the objective of the research, the role of the CEO in the company should be defined clearly. The CEO is the highest executive of a company and is hired by the board members to develop high-level strategies, make effective decisions, motivate the employees, and manage the company's daily operations. Countless real examples show that executives increase the efficiency of the company with dictatorship, which ultimately leads to the success of the company. The most famous examples are Steve Jobs (Apple Company CEO), Ian Ma (CEO of Alibaba), and Elon Musk (CEO of Tesla). CEOs do not necessarily own a company, while they are given more power than the other employees. According to the agency theory, a powerful CEO tends to become more established and possibly take actions that are detrimental to the company. Previous studies have indicated that increased executive power adversely affects profit management, while under certain circumstances, executive power could bring in large profits that benefit the company in the long run. The first problem in this regard would be "*Is changing managerial decisions crucial to understanding the behavior of the company in the future?*" Finkelstein and Hambrick [20] claim that the manager is an essential element of every company, and managerial decisions directly determine where the company is headed in the future. Profitability, capital

structure, and strategies result from successful management operations. The second problem is the definition of power; Pfeffer [36] defines power as the idea of overcoming resistance in most cases. Hence, a more powerful CEO is likely to have their aggressive decisions under pressure on behalf of the board and other executives. Based on the theory of agency, Jensen [26], Bebchuk, Cremers, and Peyer [7] concluded that more executive power is likely to lead to worse profitability and lower company valuation through measures such as Q-Tobin. A dominated executive is also prone to mergers and irrationally acquired decisions regardless of the opinion of others. Such an attitude increases the costs associated with the agency, thereby leading to a sharp plunge in stock prices, as well as substantial losses to shareholders. Conversely, moderate and rational decision-making would be possible if executives cooperated and compromised with other company executives. With a very similar argument, Sah Stiglitz [41, 42] divided some participants into different groups, and projects with different qualities are assigned to each group, so that the group members could decide upon a specific project. Through repeated experimentation, it was observed that due to the diversity of opinions, it was more difficult for a large group of people to determine the best and worst projects. In the hypothesis of the mentioned research, changes in the performance and value of companies were considered an outcome of powerful decision-making processes, and power decreased due to increased size. On the other hand, Liu and Jiraporn [31] reported a negative correlation between CEO power and company performance. Furthermore, a difference was observed between the CEO and debtors. In companies with more senior executives, the cost of debt is significantly above average. In addition, these executives tend to hide some of the necessary information from indebted companies.

Information asymmetry reduces transparency and ultimately harms the company. However, some researchers have claimed that powerful executives will benefit the company in the long run. In this regard, Finkelstein and Doveni [19] stated that rational and serious board members are more likely to hire powerful executives when the performance of the company is poor. It was also claimed that if companies are in a difficult situation, the advantage of a strong CEO to establish a single command in the company increases the risk of poor decision-making. Given the scarcity of data in this regard and the volatile and risky financial situations, a powerful CEO is considered a valuable asset of every company. Empirical evidence also suggests that small companies benefit from powerful executives [31].

A powerful CEO experiences a more ambiguous information environment, which leads to less information disclosure and information asymmetry and delays in the stock price. According to Nandini and Deepak [35], the high efficiency of a company in different industries seems to be closely correlated with the characteristics of managers. That is to say, a powerful executive is more likely to operate in an industry with product differentiation. Pfeffer and Leblebici [37] assessed the correlation between the manager's age and the focus of the industry on a certain product and observed a low correlation between the industry's focus and age of the CEO. Today, empirical facts show the importance of the industry factor; the companies that must adapt to rapid technological innovations have very powerful executives. In the energy sector, CEOs are currently more like a bridge between the board and shareholders. Therefore, it is less dominant than the advanced technology sector [7].

In general, power is an essential feature of a manager, which is the basis of their effectiveness in the organization. Managers in organizations are policymakers and power holders, and the performance of organizations is intertwined with their power. By using the sources of power, managers fuel growth and excellence. The field of deviation and corruption of the organization depend on the nature of the company and use of power and its resources. The more power managers have, the sounder is their judgments. Therefore, powerful CEOs, with a good understanding of the accounting system and existing

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laws, accounting profit decisions and financial risk reduction, are more inclined toward long-term investments and future productive activities (e.g., cash management, production sector) [5]. The higher power of managers may lead to the more efficient management of company operations, especially in critical periods when managerial decisions could have a significant impact on the performance of the company. When a company faces a crisis, capable managers make better decisions about their required financing. Powerful managers also have more independence and a more supervisory role over the board, which reduces the loss of stakeholder rights, agency costs, information asymmetry, and the transparency of financial information to ultimately improve profit management. A powerful CEO also experiences a clearer information environment that leads to more information disclosure measures, the asymmetry of the resulting information enhances in shaping stock prices, and earnings management and stock price delays will decrease. The results of many studies showed that the size of the board has a significant negative impact on company risk. The impact of CEO power on stock prices has also been confirmed in numerous studies. Some examples of research are given below, and in the following, the hypothesis of this research is defined.

### 3 Empirical Researches

Su et al. [46] evaluated the impact of board size and social trust on the risk-taking of a company. Their findings indicated that the size of the board of directors had a negative and significant effect on the company's risk-taking. Furthermore, social trust was observed to have a negative and significant effect on risk-taking, as well as a significant moderating effect on the association of board size and company's risk-taking. Haider and Fang [23] examined the impact of CEO power on company's risk-taking in terms of the moderating role of institutional ownership. The results of their research showed that the power of the CEO had a negative and significant effect on the company's risk-taking. In addition, institutional ownership had a significant adjustment effect on the correlation between CEO power and the company's risk-taking. Baker et al. [5] assessed the impact of CEO power on accrual-based and real earnings management, and the results showed that the power of the CEO had a negative and significant effect on earnings management based on accruals. Also, the power of the CEO had a negative and significant effect on real profit management.

Chi Chor Chao et al. [11] examined the correlation between CEO power and capital structure in Chinese state corporations using the data collected in 2001-2012. According to the findings, the power characteristic of the CEO had a significant impact on determining the capital structure, which leads to the ineffectiveness of oversight corporate governance mechanisms. Another study examined the effect of CEO power on the agency costs. To measure agency costs, four criteria were determined, which were asset turnover ratio, operating costs, company liquidity, and intangible asset ratio. The obtained results showed that the power of the CEO had a negative and significant effect on agency costs.

Eom [15] performed a study to determine whether foreign shareholders contribute to the process of discovering stock prices, and the obtained results indicated that the higher percentage of ownership and trading volume of foreigners (non-citizens of a country) in the shares of a company led to greater delays in the reaction of the company's stock price. Sun and Yu [47] examined the effect of management structure on stock price delays. The results of their research showed that in the companies with a more independent board of directors, the delay in the stock price reaction is less, and the stock price adjusts and reacts more rapidly to new information. In a study, Gordon and Wu [21] evaluated informed trading, uninformed trading, and stock price delays, reporting that more information asymmetry causes the stock price to react to available information with a greater delay and slower adjustment. Moreover, they observed that the better quality of corporate information disclosure reduced information asymmetry, as

well as the delays in the stock price response. Luo et al [32] examined the effect of institutional investors on stock price awareness in Tokyo Stock Market. For this purpose, they analyzed the correlation between institutional ownership and stock price awareness, and the results showed that higher institutional ownership increased stock price awareness. In other words, the presence of institutional investors (especially foreign institutions) may increase the amount of the information reflected on stock prices.

Callen et al [10] conducted a study to investigate the quality of accounting information, price adjustment delay, and predictability of future returns. In addition, they assessed the correlations between the quality of accounting information, the rate of stock price adjustment, and the expectation of higher returns in companies with low-quality accounting information. According to the obtained results, increasing the quality of accounting information would reduce the delay in the stock price response, which in turn decreased the future returns.

Rahnama and Zandi [40] evaluated the impact of CEO power on the financial leverage of companies in a sample of 150 companies listed on TSE during 2010-2017. The findings indicated that the higher power of the CEO would negatively move corporate capital structure and financial leverage ratio, thereby reducing debt in the corporate capital structure. Tavangar Hamzeh Kalaei and Scaffi Asl [48] examined the correlations between the power of the CEO, audit committee features, and quality of internal control. For this purpose, the data of 90 companies listed on TSE were tested in the form of logit analysis. The results showed that the power of the CEO had a negative and moderating effect on the positive correlation between the size of the audit committee and the quality of internal control. In another study, Aflatonl [2] examined the effects of financial reporting quality and information asymmetry on the delays in stock price responses. The findings indicated that the higher quality of financial reporting and lower degree of information asymmetry would lead to the reduction of stock price response delay. Pourzamani and Ghamari [38] also investigated the correlation between the quality of financial reporting and the speed of stock price adjustment, reporting no significant difference in the rate of the delayed response of stock prices to good and bad news in TSE. Similarly, Khodamipour et al. [28] investigated the correlation between the speed of stock price adjustments and variability in earnings quality. According to the findings, the correlation between the earnings quality and stocks in stock price adjustment was not significant. It was also stated that the response rate of good and bad information in stock prices was statistically the same with a symmetrical behavior pattern.

Based on theoretical foundations, the main hypothesis of our research was that the power of the CEO affects stock price delays.

## 4 Data Analysis

Data analysis was performed using descriptive statistics and central indicators, including mean, median, and the scatter indices of standard deviation. The fixed effects regression model was used to test the research hypothesis. In terms of objective, this is an applied research so that the obtained results could be used in decision-making processes. In addition, this is a descriptive-correlational study as the researcher seeks to evaluate the correlations of two or more variables.

To analyze the data and extract the research outcomes, we used the Excel software version 2010 and EViews software version 8. A confidence level was considered in testing the research hypothesis and classical regression hypotheses (95%). In addition, the fixed effects model was applied to test the hypotheses. In the combined data, the F-Limer test was used to select the panel data and integrated data. Based on this test, fixed data were selected to assess the hypotheses. Notably, the classical hypothesis test is of particular importance in determining the parameters of regression models. Some of the most

important hypothesis in this regard is the hypothesis of autocorrelation and non-heterogeneity of variance between the residuals of the model. The test results in the present study indicated that the residuals of the studied models had normal distribution. Moreover, the Durbin-Watson (DW) test was employed to detect the presence of autocorrelation between the residuals, and the value of this statistic for the research models indicated the lack of autocorrelation between the residuals. Based on the theoretical framework and research background, we used multivariate regression as the main research model. Model 1 was selected to test the hypothesis, as follows:

$$D_{i,t} = \alpha_0 + \beta_1 \text{CEO power}_{i,t} + \beta_2 \text{SIZE}_{i,t} + \beta_3 \text{LEV}_{i,t} + \beta_4 \text{LIQUID} + \beta_5 \text{ROA}_{i,t} + \beta_6 \text{MTB}_{i,t} + \varepsilon_{i,t}$$

**Table 1:** Definition of Model Variables

Symbol	Variables
D	Stock Price Delay
CEO Power	Power of CEO
SIZE	Size of Corporation
LEV	Financial Leverage
LIQUID	Corporate Liquidity
ROA	Return on Assets
MTB	Market-to-Book Ratio

#### 4.1 Measurement of Variables

Dependent Variables are described as follows:

**Stock Price Delay:** Based on the model developed by Ho and Moskowitz [25], we calculated the stock price delays relative to the published data of each company using the following regressions:

*Equation (1): Constrained Regression*

$$r_{j,t} = \alpha_j + \beta_{1,j} r_{m,t} + \sum_{n=1}^4 \partial_{j,t} R_{m,t-n} + \varepsilon_{i,t}$$

*Equation (2): Unconstrained Regression*

$$r_{j,t} = \alpha_j + \beta_{j,2} r_{m,t-1} + \varepsilon_{i,t}$$

In the equations above,  $r_{j,t}$  is the stock return of company  $j$  in month  $t$ , and  $R_{m,t}$  is the monthly market return based on the market index. In the present study, it was assumed that if the stock price reacts to the published information with a delay, some of the  $\partial_{j,t}$  estimated by the regression Equation 1 significantly deviates from zero. Therefore, the recent returns increase the ability to explain the regression. Assuming that all the values of  $\partial_{j,t}$  are zero, regression Equation 2 could also be estimated. Based on the calculated coefficient of determination, the price delay was calculated based on the monthly returns in the mentioned equations, as follows:

$$D_t = \frac{R^2_{\text{restirected}}}{R^2_{\text{unrestirected}}}$$

Independent Variables are as follows:

**CEO Power:** CEO power was measured based on the research by Lisic et al. and six main criteria, which have been discussed in the following sections.

*Criterion 1-Recomp\_D*

Salary and benefits of the CEO, which is calculated by dividing the cash bonus approved at the general meeting by the total salary paid in the company's fiscal year (Recomp\_D), is a dummy variable. If the cash bonuses approved by the company divided by the total paid salary and benefits is more than the median of the same period of the companies with a relevant industry in the sample, it indicates the power of management with the value of one; otherwise, the value becomes zero. In Iran, the information on the salaries and benefits of managers and the bonuses of board members and the CEO is not reported separately for each of these variables. Therefore, we calculated the total bonuses of the board of directors and the CEO.

*Criterion 2-CEO Duality*

This criterion has been defined as the duality of the executive director and the chairman of the board of directors, which is equal to one if the CEO is also the chairman or vice-chairman of the board of directors; otherwise, the value is considered zero.

*Criterion 3-CEOHolding\_D*

Executives with more stock ownership are more likely to reduce the board's influence to increase their own decision-making power. Therefore, executives with more stock ownership tend to be more powerful (Finkelstein, 1992). In the present study, CEOHolding\_D was considered as a dummy variable; if the total shares in the possession of the CEO of company I is more than the median of the total shares in the possession of the CEO of the companies in a relevant industry in the sample, it indicates the power of the CEO with the value of one; otherwise, the value is equal to zero.

*Criterion 4-CEO Tenure (CEO\_Tenure\_D)*

This criterion has been defined as the number of the years that the CEO has been active in the management of the company. CEO tenure increases the CEO's influence and power. CEOHolding\_D is a dummy variable; if the tenure of the CEO of the studied company (i) is more than the median of the total tenure of the CEOs of the companies in a relevant industry, it indicates the power of the management and takes the value of one; otherwise, it equals zero.

*Criterion 5-Number of CEO's Positions (NumExec\_D)*

This criterion refers to the number of executive positions before becoming a CEO. Different executive positions below the CEO's position in the hierarchy of a company increase the expertise and knowledge of the CEO and increase their power in turn. In the present study, executive positions included director-general, interior minister, president, CFO, COO, vice president, and vice presidents with government duties. NumExec\_D is a dummy variable; if the number of CEO positions (i) is greater than the median of the total number of CEO's positions in the same period of the companies in a relevant industry in the sample, it indicates the power of the management and takes the value of one; otherwise, it would be equal to zero.

*Criterion 6-Number of Executive Management Years (NumYear\_D):*

It refers to the number of the years that the CEO of the company has held the position as the president, CFO, COO, Vice president, vice president with government duties or director-general. Executives with long years of experience in a company have more knowledge of the company and have acquired more CEO power as a result. NumYear\_D is a dummy variable; if the tenure of the number of the years of CEO in the company (i) is more than the median of the total number of the tenure of the CEOs of the same period of a sample company in the respective industry, it indicates the power of the CEO and takes the value of one; otherwise, it equals zero. Finally, the CEO power index was considered as the mean value of the index variables listed above, equal to a value within the range of 0-1; closer values



to one would indicate the increased power the CEO and vice versa. The measured control variables in the present study were as follows:

*Company size (SIZE)*: Equals the natural logarithm of the total assets of the company [23];

*Company liquidity (LIQUID)*: The ratio of cash and the cash equivalents to the total assets of the company [23];

*Return on assets (ROA)*: The ratio of the net profit after tax to the total assets [23];

*Market-to-book ratio of the equity of shareholders (MTB)*: The ratio of the market value of equity to the book value of equity [23];

*Financial leverage (LEV)*: The ratio of total liabilities to the total assets [23]

## 4.2 Population and Sampling

The sample population of our study included the companies listed on TSE during 2011-2018. We used purposive sampling (systematic removal) and initially selected all the companies within the community in case they met the following inclusion criteria (otherwise excluded):

1. For comparable information, the end of the fiscal year had to be March 20.
2. For homogeneous information, the companies had to be active in a production industry.
3. The stock trading of the companies should not have been stopped for more than three months on TSE during the research period.
4. Information had to be available on the selected research variables.

Correspondingly, 107 companies were selected as the sample population. Table 2 shows the results of the descriptive analysis of the variables.

**Table 2:** Descriptive Analysis of Research Variables

	Mean	SD	Median	Max.
D	0.122	0.166	0.0105	0.969
CEO Power	0.323	0.230	0.000	1.000
SIZE	14.311	1.485	10.952	19.249
LEV	0.604	0.207	0.040	0.987
LIQUID	0.0410	0.0482	0.00018	0.460
ROA	0.095	0.159	-0.541	0.626
MTB	3.261	2.53	0.252	18.090

Table 2 shows the descriptive analysis of the research variables and the descriptive parameters of each variable separately. These parameters mainly included information on central indicators (e.g., maximum, minimum, mean, median) and information on dispersion indicators (e.g., standard deviation). Mean was considered the most important central indicator, representing the equilibrium point and center of gravity of the distribution. It is also a proper indicator of data centrality; for instance, the mean value of the SIZE variable was estimated at 14.311, demonstrating that most of the data on this variable were centered on this point. In general, scattering parameters are a criterion for determining the degree of data scattering with each other or their scattering relative to the mean. Standard deviation is regarded as a key scattering parameter, which was equal to 2.53 for the MTB variable and 0.042 for the LIQUID variable in our study. Therefore, it was concluded that MTB and LIQUID have the highest and lowest rates of dispersion.

## 5 Results of the Methodology

Before the estimation of the models, the appropriate estimation pattern of each model was determined using the Chow and Hausman tests; the results are shown in Table 3.

**Table 3:** Tests Results of Selecting Appropriate Modeling Estimation Patterns

Assessed Pattern	Chow Test		Hausman Test	
	Statistic	Sig.	Statistic	Sig.
Pattern #1	5.10	0.000	15.02	0.020

In the estimation of the research model pattern #1, the significance of the Chao and Hausmann statistics indicated that the models could be estimated using the fixed effects model, which was performed by the researchers. Table 4 shows the results of research model estimation by panel data analysis with fixed effects.

**Table 4:** Results of Research Model 1 for Hypothesis Testing (DT)

Variable	Coefficient of Variable	T-test	VIF Statistic
$\alpha_0$	0.217	3.82	
CEO POWER	-0.0842	-3.39	1.06
LIQUID	-0.23	-1.90	1.11
ROA	0.133	2.82	1.70
LEV	0.051	1.38	1.74
SIZE	-0.0061	-1.51	1.13
MTB	-0.0042	-1.73	1.11
Adjusted Coefficient of Determination	0.060		
F-statistic	3.69		
P-value of F-statistic	0.0012		
Wooldridge Statistic	0.350		
P-value of Wooldridge Statistic	0.572		

According to the information in Table 4, the obtained F-statistic (3.69), and its standard error rate (0.0012), it could be inferred that the research model had a high significance in general. Furthermore, the adjusted coefficient of determination obtained for the model (6%) indicated that the independent and control variables of the model could explain more than 6% of the changes in the dependent variable. Due to the insignificance of the Wooldridge statistic (0.572), serial autocorrelation was not detected in the rest of the research model. The variance inflation factor also indicated that the independent variables had no linearity problem. The current research aimed to evaluate the effect of CEO power on stock price adjustment delays. According to the information in Table 4 on the estimation of model #1, the value of the CEO power factor was equal to -0.042 (P=0.001), which was lower than the error level of 0.05. Therefore, the negative CEO power factor indicated that the increased power of the CEO may reduce stock price delays. As a result, the research hypothesis was confirmed at the confidence level of

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0.95. The results of hypothesis testing in our study are consistent with the theoretical foundations and research by Baker et al. [5]. Accordingly, the higher power of a CEO is associated with less delay in stock prices. In addition, the power of the CEO compared to other factors has the most significant impact in this regard.

## 6 Discussion and Conclusion

The present study aimed to investigate the effects of CEO power on stock price delays in the companies listed on TSE. For this purpose, the available data were analyzed, and the obtained results indicated that the power of the CEO has a negative and significant effect on stock price adjustment delays. Power is a key feature of a managerial role, which contributes to the more efficiency of the manager in the organization. Managers in organizations are policymakers and power holders as well, and the performance of organizations is directly linked to their power. By using their power sources, managers could pave the way for growth and excellence, as well as the deviation and corruption of the organization, depending on the nature of the used power and its sources. More powerful organizational managers are most likely to have accurate, sound judgments. Therefore, powerful CEOs who have an adequate knowledge of the accounting system and the existing rules and are able to making proper decisions regarding accounting profits and financial risk reduction are more directed toward long-term investments and future productive activities (e.g., cash management and its use in production sector).

The higher power of managers also leads to the more efficient management of organizational operations, especially in the critical periods when managerial decisions could largely influence the company's performance. When a company is in crisis, capable managers are able to make better decisions about the required financing. Furthermore, powerful managers with more independence play a supervisory role over the board, which reduces the infringement of the stakeholders' rights and lowers the agency costs, thereby decreasing the information asymmetry and transparency of financial information; as a result, stock price adjustment delays will decrease. A powerful CEO also experiences a clearer information environment, which results in more information disclosure measures and the improved asymmetry of the resulting information in shaping stock prices; ultimately, stock price adjustment delays will decrease. Our findings are consistent with the results obtained by Chi Chor Chao et al. and Faccio et al., while inconsistent with the study by Nandini and Deepak due to differences between the sample populations. Based on the results of the research hypothesis test in our study, it is suggested that all users be mindful of any decline in companies' performance (e.g., due to CEO weakness) as it increases stock price adjustment delays. In other words, risk-averse investors never consider the companies in which the stock price delay is at the maximum (highest) level to be desirable for investment. It is also recommended that the board composition on conservatism and timeliness in the reporting of earnings be assessed in the companies listed on TSE.

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