



# Effect of the CEO's Financial Expertise on Stock Price Delays

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## ABSTRACT

The aim of this study is to investigate the effect of CEO's financial expertise on Stock Price Delay of listed Companies in Tehran Stock Exchange. For this purpose, one hypothesis is developed and data on the 107 companies in Tehran Stock Exchange for the period of 2011 to 2018 were analyzed. This regression model using panel data with fixed effects approach and tests. The results showed that the concentration CEO's financial expertise has significant Negative impact on Stock Price Delay. Therefore, the research results indicate that the Powerful executives have more independence and you have more supervisory roles on the board this reduces the disadvantages of stakeholder rights and reduce the agency costs, and thus reduce agency costs reduce information asymmetry and reduce the opacity in financial and thus Decrease Stock Price Delay.

## 1 Introduction

Deficient and ambiguous information in the capital market affects stock prices more slowly and prevents the timely discovery of stock prices (Vershia, 1980; Cullen et al., 2000). It is taken for granted that investors make logical decisions, and thorough information is available on traded assets. Information is rapidly reflected in stock prices. Nevertheless, studies have shown a lack of thorough information in the market (Barry and Browt, 1984; Akins et al., 2012). Price adjustment is the reflection of information in stock prices; this process causes stock trading prices to be close to their real value and eventually become equal to this value (Amihoud, 1987). The adjustment rate of stock prices refers to the time it takes for information to be reflected in stock prices so that stock trading prices would reach their real value. Stock market prices contribute to cash flows into companies, requiring prices to reflect the intrinsic value of shares. Therefore, pricing efficiency is

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defined as the equality of stock prices with their intrinsic value, which only occurs with informational efficiency (Abidellah, 2002). Informational efficiency is achieved when there is no disruption in access to published information (Sanders, 2001). Operational efficiency is another requirement of pricing efficiency. Based on the operational efficiency theory, trading must take place with minimum costs. High trading costs prevent the rapid and accurate adjustment of prices. In addition, delays in price adjustment are risky to both the seller and the buyer as information is not completely reflected in stock prices. Notably, the prompt and complete reflection of information may have positive or negative effects on stock prices. This is while the buyer and the seller expect risk-free profits with this choice, which increases the possibility of adverse selection (Cullen et al., 2013).

The phenomenon of stock price adjustment is affected by multiple factors, the most important of which are deficient information (Shapiro and Mixfield, 2002), information asymmetry (Elisely et al., 2002), loan sales ranges (Jones, 2002), taxes (Constantinides, 1984), liquidity (Poster, 2002), quality of accounting information (Cullen et al., 2010), and disruptive traders (Shliffier et al., 1997). In this regard, the findings of Maristi(2002) confirm the stock prices' overreaction effect on the first days after new information is released into the market and differences in price adjustment coefficients of different companies. In addition, they reported no significant correlation between the company's size and the price adjustment coefficient. According to Ho and Moskowitz (2005), delayed reaction of stock prices is inversely correlated with the analytical power of shareholders and stock liquidity. Furthermore, Cullern et al. (2009) reported a negative correlation between the quality of accounting information and delayed stock price adjustment. The results obtained by Lee et al. (2010) also indicated that the adjustment rate of stock prices in the Taiwan Stock Exchange has an asymmetric behavior, and the adjustment of stock prices is higher in reaction to good news than bad news.

In another study, Sun and Yu (2014) stated that the delayed reaction of stock prices is less probable in the companies with a more independent board of directors, and stock prices react more quickly to new information and adjust. Gordon and Wu (2014) also reported that more information asymmetry is associated with more delays in the reaction of stock prices to information and a slower rate of adjustment. In addition, they claimed that the higher quality of corporate information disclosure could decrease information asymmetry and delayed stock price reactions. According to Om (2015), the higher ownership percentage and exchange percentage of

foreigners (non-citizens of a country) in a company's shares will increase the delayed reaction of the company's stock prices. In Iran, Mehrara and Abdoli (2006) observed that good and bad news affect future price fluctuations at the same rate, which could be due to the slow information flow and the 'young age' of the Tehran Stock Exchange (TSE). Khani and Farahani (2008) also reported that in the TSE, prices react more slowly to published information. Meanwhile, Rahmani et al. (2012) stated that in the companies that have less unexpected earnings and high accrual quality (alternative variable to disclosure quality), stock prices react more quickly to information. According to EbrahimiKordlari et al. (2013), stock prices react more quickly to bad news than good news in more conservative companies.

In another research, Javanmard and Poormoosa (2013) evaluated the quality of financial reporting and accrual quality (alternative variable), observing no significant difference in the adjustment rate of stock prices between companies with high- and low-quality reporting quality. In another study, Poorzamini and Ghamari (2014) reported that in the TSE, delayed reaction of stock prices to good news and bad news had no significant difference. In addition, HassasYeganeh and Omidclaimed that higher accrual quality and profit information content would decrease delayed stock price reaction. Khodamipoor et al. (2014) also reported that the correlation between earnings quality and delayed stock price adjustment is not significant.

In the studies conducted in Iran regarding delayed stock prices, researchers have not assessed the effects of management factors (e.g., CEO's financial expertise) on delayed stock prices. The CEO's financial expertise may be closely correlated with the quality of corporate financial reporting and is also essential to such complex disclosure. Therefore, it is expected that CEOs with financial expertise perform better in terms of tax evasion planning compared to the CEOs who lack this skill. Furthermore, executives with financial expertise could better detect accounting deviations in their company (Chen et al., 2019; 2). This will, in turn, decrease delayed stock price adjustment. The present study aimed to investigate the effect of the CEO's financial expertise on delayed stock prices in the companies listed on the TSE. Notably, the CEO's financial expertise was an imaginary number, which would be considered one in case the CEO had prior experience in accounting, financing management, or senior accounting; otherwise, it would be considered zero (Kalehkar and Khaan, 2017). This paper has been structured into various sections, including theoretical principles and research background, research hypotheses, methodology, findings, discussion, and conclusion.

## 2 Theoretical principles and research background

In this study, we have discussed the long-term effects of the CEO's financial expertise on corporate outcomes. In some companies, the CEO's expertise influences important decision-making processes. The CEO is the superior executive of a company and is in charge of the principal matters and decisions. Numerous real examples prove that executives who have financial expertise increase the efficiency of a company, eventually bringing in enormous success. Previous studies indicate that the higher financial expertise of a CEO positively affects profit management. Under specific circumstances, such expertise will bring in massive profit, which benefits the company in the long run. Finklestein and Humberk (1996) reported that the manager of a company is the key to the company's success. Managerial decisions determine the future direction of the company. Profitability, structured capital, and strategies are the outcomes of successful managerial operations. Some researchers believe that executives with financial expertise will bring in profit for the company in the long run. In this regard, Finklestein and Downie (1994) stated that an intelligent board of directors will most probably recruit managers with financial expertise when corporate performance is low. They assume that if companies are in a difficult situation, the advantage of having an executive with financial expertise for unified leadership in the company may be associated with an excessive risk of poor decision-making. When resources are low and finances are unstable, an executive with financial expertise will be able to organize the company. Moreover, experimental findings show that small companies often recruit executives with financial expertise (Liugirapurn, 2010).

Senior financial managers of companies play a key role in providing corporate financial reports. If a CEO has accounting expertise, the quality of corporate reporting will most likely increase. Therefore, accounting expertise helps managers evaluate the consequences of financial reporting. On the other hand, changes in international accounting standards require an accounting expert to prevent financial reporting deviations in corporations. Accounting expertise is essential to evaluating such complex disclosure. Evidently, a CEO with accounting expertise will be able to better deal with tax evasion planning compared to CEOs without such a skill. Furthermore, executives with financial expertise could better detect accounting deviations in their company (Chen et al., 2019; 2). In general, financial expertise is a prominent skill of managers and increases their organizational impact. Organizational managers determine the policies, and organizational

performance is correlated with their financial expertise. By using such expertise, managers will be able to promote and improve the organization, which depends on the nature and function of their skills in exploiting financial expertise and resources. Managers with high levels of financial expertise have a more sound judgment. By understanding accounting systems and their regulations, they will be more efficient in decision-making regarding accounting profit and financial risk reduction. As a result, they will be directed toward long-term investment and productive endeavors in the future (e.g., cash management and its use for production) (Becker et al., 2019). With this background, it could be concluded that the financial expertise of managers will increase the managerial efficiency of corporate operations, especially under critical circumstances where managerial decisions are vital in corporate performance. Moreover, managers with financial expertise are more likely to make better financing decisions in periods when the company is in crisis.

### **3 Research background**

In a study, Su et al. (2019) evaluated the effects of social trust, size of the board of directors, and corporate risk-taking, reporting that the size of the board of directors had a significant, negative effect on corporate risk-taking. Moreover, their findings indicated that social trust had a significant mediating effect on the correlation between corporate risk-taking and the size of the board of directors. RahnamayRoodposhti and Zandi (2019) investigated the effect of CEO's power on the financial leverage of companies in a sample of 150 companies listed on the TSE during 2010-2017. The obtained results indicated that the increased power of the CEO would proportionally cause the companies' capital structure and financial leverage ratio to find a negative direction, thereby decreasing debts within their capital structure.

In another study, Aflatooni (2016) assessed the impact of financial reporting quality and information asymmetry on the delayed reaction of stock prices. According to the findings, the higher quality of financial reporting and lower information asymmetry led to the reduction of delayed stock price reactions. In another study, Om (2015) addressed the questions of whether foreign investors could help the process of stock price discovery, and the obtained results indicated that a company will have more delayed stock price reactions when foreign investors (non-citizens of a country) have a higher ownership percentage and a higher exchange percentage in the company. Gordon and Wu (2014) also investigated conscious trading, non-conscious

trading, and delayed stock prices. The obtained results indicated that in the case of high information asymmetry, stock price reactions to information will be more delayed, and stock price adjustment will be delayed as well. Furthermore, their findings showed that the higher quality of information disclosure will decrease information asymmetry, and, subsequently, delayed stock price reactions. In another study, Lu et al. (2014) assessed the effect of institutional investors on stock price awareness in the Tokyo Stock Exchange, analyzing the correlation between the level of institutional ownership and stock price awareness. The obtained results indicated that institutional ownership increased stock price awareness. In other words, the participation of institutional investors (especially foreign institutions) in the stock market would increase the information reflected in stock prices.

Poorzamani and Ghamari (2014) also evaluated the correlation between the quality of financial reporting and the adjustment rate of stock prices, observing no significant difference in the delayed reaction of stock prices to good news and bad news in the TSE. In another research, Khodamipoor et al. (2014) assessed the correlation between the adjustment rates of stock prices and profit quality changes. The obtained results indicated that the correlation between profit quality and delayed stock price adjustment was not strong, and the reflection rate of positive and negative information in stock prices was also reported to be similar, following a symmetrical behavioral pattern. In their study, Cullen et al. (2013) evaluated the quality of accounting information, delayed stock price adjustment, and the forecast of future returns. They also investigated the correlation between the quality of accounting information with the adjustment rate of stock prices and the expected higher returns in companies with low-quality accounting information. According to the findings, increasing the quality of accounting information decreases the delayed reaction of stock prices. Furthermore, decreased delays in price reactions were associated with the reduction of future returns.

## 4 Methodology

### 4.1 Research hypothesis

Based on theoretical principles, the hypothesis of the current research was as follows:

*The CEO's financial expertise affects delayed stock prices.*

### 4.2 Data analysis

In this study, descriptive statistics included central indexes such as mean, median, dispersion,

and standard deviation. In addition, the research hypothesis was tested using a fixed-effects regression pattern. Since our findings could be used in decision-making processes, this study is practical in terms of objective and descriptive-correlational in nature. Such studies aim to evaluate the correlation between two or multiple variables. In the present study, data analysis and extraction were performed in the Excel software version 2010 and the EViews software version 8. The confidence level was set at 95% in testing the hypothesis and evaluating classical regression hypotheses.

A fixed-effects method was used to test the research hypothesis. The F-Limer test was used to differentiate between the panel data and integrative data in the combined dataset, and fixed data were selected to test the hypothesis accordingly. Testing classical hypotheses is essential to estimating regression model parameters. In this regard, hypotheses of the autocorrelation and variance inequality between the remnants of the model are considered most important. In this study, the results of these tests indicated that the model remnants had a normal distribution. To assess the autocorrelation of the remnants, the Durbin-Watson (DW) test was applied, and the statistic indicated the lack of autocorrelation between the remnants of the research model.

### 4.3 Research model

Based on theoretical principles and the research background, we proposed a multivariate regression model. As such, Model 1 was used to test the hypothesis (Heydar and Fang, 2018)

*Model 1)*

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

**Table 1.** Defining model variables

Symbol	Variable
D	Delayed stock prices
Fin Exp	CEO's financial expertise
SIZE	Company's size
LEV	Financial leverage
LIQUID	Company's liquidity
ROA	Return on assets
MTB	Market-to-book ratio

## 5 Measurement of research variables

### A) Dependent variable

#### *Delayed stock prices*

Based on the model proposed by Ho and Moskowitz (2005), delayed stock prices in proportion to the published information of each company were calculated using the following regressions:

*Equation 1: unconstrained regression*

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

*Equation 2: constrained regression*

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

In the equations above,  $r_{j,t}$  represents the stock returns of company  $j$  in month  $t$ , and  $R_{m,t}$  shows the monthly market returns based on the market index. We hypothesized that if stock prices show a delayed reaction to published information, a significant difference than zero will be observed in some of the estimated  $\partial_{j,t}$  values in the first regression. Therefore, late returns will improve the descriptive ability of the regression. On the other hand, we hypothesized that if all the values of  $\partial_{j,t}$  are zero, the second regression will be realized. In such a case, delayed prices are calculated based on the coefficient of determination using the monthly returns and the following equation:

$$(3)D_t = \frac{R^2_{\text{restricted}}}{R^2_{\text{unrestricted}}}$$

### B) Independent variable

#### *The CEO's financial expertise*

In measuring the CEO's financial expertise, we considered score one for the CEOs with prior experience in accounting, financing management, or senior accounting management; otherwise, the score would be considered zero.

### C) Control variables

The company's size (SIZE) is the natural logarithm of the company's total assets (Heydar and Fang, 2018). Liquidity (LIQUID) refers to the ratio of cash and cash equivalent to the total assets of the company (Heydar and Fang, 2018).



Return of assets (ROA) is the ratio of the net profit after tax deduction to the total assets of the company (Heydar and Fang, 2018). Market-to-book (MTB) ratio is the ratio of the market value of shareholders' income to the book value of their income (Heydar and Fang, 2018). Financial leverage (LEV) is the ratio of the company's total debts to its total assets (Heydar and Fang, 2018).

## 6 Statistical population and sampling

The statistical population of the present study included the companies listed on the TSE during 2011-2018. Sampling was purposive (systemic removal). To this end, the companies meeting the following criteria were selected as samples, and the others were removed:

1. March 19 as the end of the fiscal year for data comparability
2. Production companies for data homogeneity
3. Ongoing stock trading activities in the TSE during the study timeline
4. Available data on the study variables

In total, 107 companies listed on the TSE were selected as the sample population of the research.

### 6.1 Descriptive statistics

Table 2 shows the descriptive statistics of the research variables.

**Table 2.** Descriptive statistics of research variables

Variable	Mean	Standard deviation	Minimum	Maximum
D	0.122	0.166	0.0105	0.969
Fin Exp	0.67	0.250	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

*\*Source: research findings*

Table 2 shows the descriptive statistics of the research variables, as well as the separate descriptive parameters for each variable. In general, these parameters include data on central indexes such as maximum, minimum, mean, and median, as well as dispersion data such as standard deviation.

Mean is the most important central index, which shows equilibrium and the center of gravity distribution. It is considered an accurate index to show the centrality of data. For instance, the mean SIZE parameter in our study was estimated at 14.311, indicating that most of the data on this variable were centered on this point. Overall, dispersion parameters determine the dispersion of data from each other or in proportion to the mean. Standard deviation is considered to be the most significant dispersion parameter. In the present study, the value of this parameter was estimated at 2.53 and 0.0482 for MTB and LIQUID variables, respectively. Therefore, it was concluded that the MTB and LIQUID variables had the maximum and minimum dispersion, respectively. To prevent the effect of outdated data on the findings, they were all eliminated at 1%.

**Table 3.** Test results for selecting proper model estimation pattern

Pattern	Chow test		Hausman test	
	Statistic	Significance	Statistic	Significance
Pattern 1	5.10	0.000	15.02	0.020

*\*Source: research findings*

**Table 4.** Results of model estimation (1) for hypothesis testing (DT)

Variable	Variable coefficient	t	Error rate	VIF
$\alpha_0$	0.217	3.82	0.000	
Fin Exp	-0.0762	-3.49	0.001	1.07
LIQUID	-0.230	-1.90	0.058	1.11
ROA	0.133	2.82	0.005	1.70
LEV	0.051	1.38	0.167	1.74
SIZE	-0.0061	-1.51	0.131	1.13
MTB	-0.0042	-1.73	0.085	1.11
Adjusted determination coefficient	0.061			
F statistic	3.74			
F statistical probability	0.0013			
Wooldridge statistic	0.350			
Wooldridge statistical probability	0.563			

*\*Source: research findings*

## 6.2 Inferential statistics

Before developing the research model, Chow and Hausman tests were initially implemented to determine the proper estimation pattern of the model (Table 3). The significance of the Chow and Hausman statistics in estimating the first pattern of the research indicated that the proposed model was estimated based on fixed-effects patterns. As a result, the superior approach was used to estimate the research model. Table 4 shows the results of model estimation based on the fixed-effect panel data.

According to the information in Table 4, the calculated F statistic (3.74), and the error rate (0.0013), it could be stated that the research model had high significance. Furthermore, the adjusted determination coefficient of the pattern (6%) indicated that the independent and control research variables could explain the changes in the dependent variable by more than 6%. Given the non-significance of the Wooldridge statistic (0.563), the remnants of the research model lacked serial autocorrelation. In addition, the variance inflation factor (VIF) indicated the absence of variable alignment in the independent variables.

## 6.3 Findings

Based on the hypothesis of the current research, we investigated the effect of the CEO's financial expertise on delayed stock prices. According to the obtained results based on the first estimated pattern (Table 4), the coefficient of the CEO's financial expertise was calculated to be -0.0762, and the P-value was 0.001, which was lower than the error rate of 0.05. The negative coefficient of the CEO's financial expertise indicated that the CEO's financial expertise could decrease delayed stock prices. Therefore, the hypothesis was confirmed at the confidence level of 0.95.

## 7 Discussion and conclusion

The present study aimed to evaluate the effect of the CEO's financial expertise on delayed stock prices in the companies listed on the TSE. According to the results, the CEO's financial expertise had a significant, negative effect on stock price delays. Financial expertise is considered an essential skill in every manager as it increases managerial efficacy in the organization. Managers with higher financial expertise have more sound judgments. Moreover, CEO's with financial expertise have a better understanding of accounting systems and the associated regulations, which contributes to more long-term accounting decisions, financial risk reduction, and future

productive endeavors (e.g., cash flow management, using cash in the production sector). Managers' financial expertise could also increase the efficiency of corporate operations, especially in critical operational periods when managerial decision-making plays a pivotal role in corporate performance. Finally, managers with financial expertise could make better financing decisions when the corporation is faced with a crisis.

Based on the results of the research hypothesis test, it is suggested that all users should always keep in mind in their investment decisions that a decrease in the company's performance for any reason (including the CEO's low financial expertise) will lead to an increase in shares. Delay in price adjustment In other words, risk averse investors never consider companies whose stock price delay is at the maximum (high) level as desirable companies for investment. The results of the research hypothesis test are in line with the research of RahnamayRoodposhti and Zandi (2019) and Gordon and Wu (2014).

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