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**Research Article**

# CEO's Overconfidence, Cost Stickiness, and Value Relevance of Accounting Information

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## Abstract

CEO's overconfidence is one of the essential indices that influences financial policies. When sales decline, overconfident CEOs have overconfidence in their ability to bring sales back to the previous level and tend to overestimate sales, thereby increasing cost stickiness. Further, cost stickiness by manipulating the natural and expected costs process can affect accounting information content. Therefore, the CEO's overconfidence by influencing cost stickiness can also affect the value relevance. This paper shows that there is a positive and significant relationship between overconfidence and cost stickiness. There is also a negative and significant relationship between overconfidence and value relevance. Nevertheless, the effect of overconfidence through cost stickiness on value relevance is not confirmed.

**Keywords:** Value relevance, Cost stickiness, CEO overconfidence, Stock price

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## 1. Introduction

In accounting and financial sciences have reported that CEOs' overconfidence explains why corporations are merging or combine confounding values and enter into other investments, financing, or accounting policies that can be costly. On the other hand, overconfidence can bring benefits to a company under certain conditions. For example, overconfident CEO's motivation for risk-taking activities is less costly than other managers (Campbell et al., 2011). Previous studies have shown that overconfidence differs from optimism, such that optimism is a kind of attitude, but overconfidence generally leads to an error estimation (Ben Mohammad et al., 2014). On the other hand, some researchers indicate that the increase in costs when increasing activity levels is more than the decrease in costs when decreasing activity volume. Cost stickiness is one of the indicative response to costs concerning activity level changes, indicating that the magnitude of the development degree in costs when the activity level is increased is greater than the magnitude of the cost reduction when the activity level is reduced. For example, if you see a 20-unit increase in sales level, you will probably see a 100-unit increase in costs, but if the sales level drops to 20, the cost reduction will be less than 100 (Marques et al., 2014). On the other hand, value relevance also refers to items' ability to explain price and stock returns (Roll, 1986). In other words, the more a variable has the ability to interpret returns, the more its value relevant. This concept derives from Roll (1986) about quality and value relevance.

Although both agency issues and overconfident CEOs tend to avoid eliminating excess distribution and sales costs, unlike agency issues where additional costs are held for opportunistic reasons, overconfident CEOs believe that they act in the best interests of shareholders save additional costs. Therefore, based on these arguments, it is expected that the stickiness of distribution and sales costs and cost value will increase with more CEO overconfidence. On the other hand, the greater the value of some of the factors affecting price in explaining efficiency, the greater their value relevance. However, costs stickiness by manipulating the natural and expected process of costs can affect the information content. Therefore, the CEO's overconfidence by affecting costs stickiness can also affect stock prices. Much research has examined the value relevance of items presented in financial statements. The value relevance approach requires the researcher to identify an item and codification its evaluation function against the impact on stock prices. Over the past two decades, many studies have surveyed the value relevance of accounting tables. Still, this study deals with the value relevance of one behavioral financial domain (CEO overconfidence). This study also examines CEO overconfidence's direct impact, but the indirect impact of CEO overconfidence will be measured through cost stickiness on value relevance. It will be considered to be the knowledge-building of the present study.

## 2. Literature review and hypothesis development

Overconfidence is a personal trait that can be defined as being biased and having unrealistic (positive) beliefs about any aspect of an outcome in uncertain circumstances. In this case, the average estimate will be exaggerated (Calleja, 2006). Evidence has shown that people perceive their capability and abilities more than reality. Overconfidence helps people maintain their spirits in tough and competitive situations. According to Sternberg (2008), people attribute successes to their capabilities and failures to bad luck and external factors, and environmental factors. On the other hand, CEO overconfidence is also mentioned as a behavioral interpretation for distribution and sales stickiness. When sales decline, management decisions to remove or continue resources of distribution and sales costs, to balance management's expectations about continuing decline in demand and the amount of adjusted costs associated with eliminating distribution and sales costs in the

short term and with relocating these costs while demand return (as past) shortly. Managers are more inclined to maintain additional costs if they expect future demand to recover sufficiently. When the demand returns to its original state, they are also reluctant to eliminate adjusted costs associated with eliminating costs and recovering them (which may be significantly high) (e.g., Anderson et al., 2007). In order to maintain and sustain adjusted costs, the CEO's expectations about decreasing demand performance are critical and effective in cost management decision making. On the one hand, managers motivated by power prefer to maintain the extra costs of distribution and sales to maximize their personal benefits (as follows power, status, and reputation) (Jensen, 1986), which results in greater cost stickiness. On the other hand, managers with earnings management incentives quickly eliminate the extra costs of distribution and sales to achieve optimized profit, resulting in less cost stickiness.



These studies focus on two main areas: 1- Increasing or decreasing the value relevance resulting from environmental changes or new accounting standards; 2- Impact of company and industry characteristics. Numerous studies have been conducted to investigate the relationship between earnings and stock prices and the effect of earnings announcement on price, and the relationship between cash dividends and stock price. Empirical evidence shows that information about corporate profits has great importance for investors. There are three main theories for measuring profit: 1- assets – liabilities theory; 2- income - expense theory and 3- balance sheet independence and profit and loss theory.

Koo et al. (2014) show that cost behaviors for-profit management is different. In particular, corporate profit management reduces cost stickiness when faced with declining sales. Namazi et al. (2012) show a significant negative relationship between cost stickiness and earnings management. Kim et al. (2016) showed that a stock crash risk in companies with overconfident managers is more than in other companies. The results also show that the effect of CEO overconfidence on the crash risk for companies with more conservative accounting policies is less. Xue and Hong (2016) examined earnings management, corporate governance, and cost stickiness in a study. They found an important connection between cost stickiness in the sample of non-profit companies and the sample of profit management companies. Also, empirical evidence has shown that good corporate governance can further reduce cost stickiness, although its effects are not as severe as those of earnings management companies.

Kim et al. (2016) examined the relationship between CEO overconfidence and drop stock risk. The results of his research showed that the risk of falling stocks in companies with overconfident CEOs is higher than in other companies. The results also show that the CEO's wrong overconfidence on the risk of falling for companies with more conservative accounting policies is less. Burkhardet al. (2018) examined the CEO's role overconfidence on corporate performance using a meta-analysis approach. Their results showed that CEO overconfidence is positively correlated with corporate performance, and the CEO's authority moderates this relationship. Wang et al. (2018) examined the impact of the CEO's political relationship and the CEO's overconfidence on the severity of R&D costs. Their research results show that political communications lead to lower R&D costs, but CEO overconfidence in R&D costs positively affects. Leng et al. (2018) examined the board of directors' impact on the probability of British firms' financial distress. The results show that overconfident executives increase the likelihood of financial distress, while firms with CEO's relative confidence are less distressed. Maaloul, Chakroun, and Yahyaoui (2018) examined the impact of political communication on Tunisian companies' presentation and value. Based on the results, political communication improves corporate performance and value. Investors tend to invest in companies with high political communication for greater interest.

Alnodel (2018) shows that the adoption of international financial reporting standards in the insurance industry has increased accounting information's value relevance. Yin et al. (2019) show that internal financing can reduce capital shortage, but it leads to over-investing, especially in firms with CEO overconfidence. In addition, the problem of over-investing in public companies is more than private companies. Hur et al. (2019) examined the effect of CEO overconfidence on R&D spending decisions. The results showed that overconfident CEOs, even if sales declined, did not reduce R&D costs because the CEO overconfidence had a direct and positive relationship with R&D costs. Chen et al. (2019) examined the interaction between overconfident CEO and overconfident CFO on spending behavior and cost stickiness adjustment in US firms. Results showed directly and positively correlated between overconfident CEO and overconfident CFO and cost stickiness, and after controlling overconfident CFO, overconfident CEO does not affect cost stickiness. Ben Rejeb Attia et al. (2019) show that delay in financial reporting leads to a decrease in value relevance.

In sum, one of the effective factors on the value relevance and stock price is managers' actions to prevent bad news and negative performance. Such managerial behavior, in addition to agency motives, can result from overconfidence. On the other hand, the CEO overconfident in reducing sales and keeping extra costs. Therefore, based on these arguments, it is expected that the stickiness of distribution and sales costs and cost value will increase with the CEO's overconfidence. On the other hand, cost stickiness by manipulating the natural and expected costs process can affect accounting tables' information content. Therefore the CEO overconfidence by affecting costs stickiness can also influence value relevance so that the following hypotheses will be codified and examined:

Hypothesis 1: CEO overconfidence influences the value relevance of accounting.

Hypothesis 2: CEO overconfidence influences cost stickiness.

Hypothesis 3: Cost stickiness influences the relationship between CEO overconfidence and value relevance of accounting.

## 3. Research Methodology

This research is practical according to purpose-based classification and has been done in terms of the correlational method using the post-event approach. Raw financial data were collected using Tadbir Pardaz software and referring to Research management, development, and Islamic studies management websites and using the Stock Exchange's information comprehensive network (Codal).

This research's statistical population is listed on the Tehran Stock Exchange from 2006 to 2016 (11 years). In this study, the samples were selected through systematic random sampling from the statistical population. As such, the sample consisted of all the companies in the statistical population that had the following conditions: 1- Their fiscal year ended at December 31 per year, so that the data could be put together and based on the results of the default tests, apply them in a panel or consolidated formats; 2- during the research period, there is no change in the financial period (year), so that their financial performance results are compared with each other; 3- Data required for research variables during the surveying period should be available so that the calculations can be performed as faultless as possible; 4- their stock must not be closed more than three months because the stock price quotes of companies are used in this study; 5. Companies that are not in the investment group, financial institutions, banks, insurance, and holding (due to differences in the balance sheet, specific nature of the activity, and unusual financial leverage). Finally, considering the above conditions, using the Cochran formula, 114 firms were identified and studied using random sampling.

The following regression is fitted for the first hypothesis test of the study that states

that the CEO overconfidence influence value relevance. (Olson, 1995):

$$Price_{i,t} = \alpha_0 + \alpha_1 BVPS_{i,t} + \alpha_2 EPS_{i,t} + \alpha_3 OverConf_{i,t} + \alpha_4 BVPS^* OverConf_{i,t} + \alpha_5 EPS^* OverConf_{i,t} + \varepsilon_{i,t}$$

Where:

Price is Market value per company share at the end of the year

BVPS is Book value per company share at the end of the year

EPS is net earnings per share at the end of the year

OverConf is CEO overconfidence at the end of the year

It should be noted that the CEO overconfidence variable while multiplying by the book value variables of each share and net profit per share has appeared as a moderating variable, thus affecting this variable on the value relevance between the book value of per share and net profit per share should be measured. In Olson's model, these coefficients are the basis of the decision. The relative status of corporate investments has been used to measure overconfidence (Ben Mohammed et al., 2014). Campbell et al. (2011) stated that the amount of corporates investment could include information about CEO overconfidence. He selected companies in the top five in terms of industry-adjusted investment (the ratio of company investment to the total investment in that industry) accepted as companies whose management is overconfident. The capital expenditure derived from the cash flow statement will be used to calculate corporate investment. If corporate management is defined as overconfident management, the variable will be set to one; otherwise, it will be zero.



The below regression model is applied to examine the second research hypothesis, which suggests that management's overconfidence is effective on cost adherence:

$$\Delta Cost_{i,t} = \alpha_0 + \alpha_1 \Delta S_{i,t} + \alpha_2 \Delta S \times D_{i,t} + \alpha_3 OverConfC_{i,t} + \alpha_4 \Delta S \times D \times OverConfCE_{i,t} + \alpha_5 TYD_{i,t} + \alpha_6 GG_{i,t} + \alpha_7 FAI_{i,t} + \alpha_8 LEV_{i,t} + \varepsilon_{i,t}$$

Where:

ΔCost is the dependent variable the change in the sum of the cost value of goods sold and general and sales costs (the natural logarithm of the ratio of the total sum of cost value, goods sold, and administrative costs, public expenditures and sales. ΔS is the natural logarithm of the ratio of company sales revenue; D is the dummy variable the decrease in sales revenue if sales revenue in year t declines compared to year t-1, it equals one, otherwise will be equal to zero.

Control variables of the model are as follows (Anderson et al., 2007):

TYD is a dummy variable that if the s sales revenue declines over two subsequent years (years t to t-1 and t-1 to t-2), equals 1, otherwise 0.

GG is gross domestic product growth equal to the gross domestic product ratio in year t to t-1.

FAI is the intensity of investment in fixed assets equal to the ratio of fixed assets to sales revenue. LEV is financial leverage equal to the ratio of total liabilities to total assets. To test the mediating effect of cost stickiness on the relationship between CEO overconfidence and value relevance, Baron and Kenny's (1986) method is used. They have suggested that the effect of the mediator variable should have three conditions: The first condition, independent variable (s) (CEO overconfidence) should affect the dependent variable (value relevance) in a regression of the independent variable on the dependent variable; second, the independent variable (s) should affect the mediator variable (cost stickiness); the third condition, the mediator variable must affect the dependent variable in a regression of the independent variables and the mediator variable on the dependent variable.

If there are the above conditions and the effect of the CEO overconfidence variable on the value relevance variable in the third equation is less than the first equation, it can be

concluded that the mediating variable effect is created using the significant level. Consequently, Baron and Kenny (1986) state that the full effect of the mediating variable is created when the independent variable(s) in the third equation does not affect the dependent variable, but in the third equation if the independent variable has less influence on the dependent variable than the first equation. If so, the effect of the mediator variable will be minor.

To test the third hypothesis of the study, which states that the CEO overconfidence through cost stickiness affects the value relevance, first of all, we should determine the companies with cost stickiness from the cost-value ratio of the goods sold and the general, administrative, and sales costs will be used. (Anderson et al., 2007):

$$\text{CostRatio} = \frac{\text{Cost}_t}{\text{Sales}_t} - \frac{\text{Cost}_{t-1}}{\text{Sales}_{t-1}}$$



Where:

Cost represents the cost value of goods sold and public, administrative, and sales costs, and Sales indicates sales revenue.

The following formula will be used for each year-company to determine companies with cost stickiness:

$$\text{CostStick}_{it} = \text{CostRatio}_{it} \times D_{it}^{Sales} \times D_{it}^{Cost}$$

Where:

$\text{CostStick}_{it}$ It is a dummy variable that, if its value is greater than zero, will be equal to one, and otherwise, it will be zero.

$D_{it}^{Sales}$ is a dummy variable which If the sale ratio in year t to year t-1 becomes greater than and equals one, it will be zero and otherwise equal to one. $D_{it}^{Cost}$ It is a dummy variable that if the ratio of the cost of goods sold and the costs of public, office, and sales cost are less than or equals zero, it is considered zero; otherwise, they will be equal to one. For the year - companies in which the above formula is a positive indication that there is a cost stickiness in that year, and “zero" indicates no cost stickiness. Finally, the following model is estimated to investigate the third condition:

$Price_{i,t} = \alpha_0 + \alpha_1 BVPS_{i,t} + \alpha_2 EPS_{i,t} + \alpha_3 OverConf_{i,t} + \alpha_4 BVPS^* OverConf_{i,t} + \alpha_5 EPS^* OverConf_{i,t} + \alpha_6 CostStick_{i,t} + \alpha_4 BVPS^* CostStick_{i,t} + \alpha_5 EPS^* CostStick_{i,t} + \varepsilon_{i,t}$

All variables are defined in previous sections.

## 4. Research findings

Table 1 contains descriptive statistics of the research variables. This table presents the minimum, maximum, mean, median, and standard deviation of all variables.

**Table 1:** Descriptive statistics related to the research variables

| Variable | Minimum | Maximum | Median | Mean | standard deviation |
|---|---|---|---|---|---|
| *ΔCost* | -1.449 | 1.802 | 0.160 | 0.159 | 0.319 |
| *ΔS* | -1.308 | 1.412 | 0.151 | 0.151 | 0.349 |
| *OverConf* | 0.000 | 1.000 | 0.000 | 0.307 | 0.445 |
| *TYD* | 0.000 | 1.000 | 0.000 | 0.110 | 0.205 |
| *FAI* | 0.182 | 3.566 | 0.275 | 0.562 | 1.210 |
| *LEV* | 0.090 | 2.027 | 0.614 | 0.642 | 0.223 |
| *GG* | 1.051 | 1.341 | 1.230 | 1.201 | 0.101 |
| *Price* | 554.102 | 72111.482 | 7202.116 | 7110.612 | 5885.200 |
| *EPS* | -1000.123 | 6203.515 | 659.306 | 711.003 | 512.705 |
| *BVP* | 752.802 | 8542.118 | 2142.809 | 2189.224 | 1035.505 |

Some panel data tests are used to choose between the consolidated data model, the fixed-effect model, and the random effect model. Like the Chow test and the Hausman

test, the results of these tests are shown in table 2:

**Table 2.** Panel test results

| Description | Chow test | | Hausman | |
|---|---|---|---|---|
| | Stastics | Probability | Stastics | Probability |
| Model1 | 1.112 | 0.263 | - | - |
| Model 2 | 0.894 | 0.719 | - | - |
| Model3 | 2.389 | 0.011 | 22.003 | 0.015 |

The Chow test statistic's probability in cases greater than 0.05 indicates the validation of the consolidated data model. If the consolidated data model were preferred, that's all. Otherwise, the Hausman test is necessary. The Hausman test statistic's probability for cases greater than 0.05 indicates the confirmation of the random-effects model. The regression conclusions of the effect of CEO overconfidence on value relevance are presented in table 3.



**Table 3.** Regression results of the effect of CEO overconfidence on value relevance

| Explanatory variable | Coefficients | T Statistics | Probability |
|---|---|---|---|
| *C* | 0.177 | 3.445 | 0.000 |
| *BVP* | 0.321 | 6.554 | 0.000 |
| *EPS* | 0.006 | 0.373 | 0.708 |
| *OVER* | -0.381 | -6.885 | 0.000 |
| *BVPOVER* | -0.018 | -2.352 | 0.018 |
| *EPSOVER* | -0.022 | -2.389 | 0.011 |

Stastics : F : 9.4418 Probability : 0.000 Statistics : DW : 2.315 Adj , R2 : 0.582

The calculated tables in table 3 show that the regression model is significant. The determination coefficient also shows that the mentioned model expresses about 58% of the stock price change. The Watson camera statistic also indicates that there is no first-order serial autocorrelation model. According to the coefficients calculated for each of the explanatory variables and their significance level, the CEO overconfidence variable has a negative and significant relationship with the stock price, with a coefficient of -0.3817 and a significant level of 0.000 at 95% confidence level.

**Table 4.** Regression results impact of management overconfidence on cost stickiness

| Explanatory variable | Coefficients | T Statistics | Probability |
|---|---|---|---|
| C | 0.084 | 0.726 | 0.467 |
| *S* | 0.775 | 19.279 | 0.000 |
| *SD* | -0.054 | -2.112 | 0.035 |
| *OVER* | 0.502 | 12.124 | 0.000 |
| *SDOVER* | -0.412 | -3.998 | 0.000 |
| *TYD* | -0.021 | -0.199 | 0.841 |
| *GG* | 0.028 | 2.333 | 0.019 |
| *FAI* | 0.060 | -1.040 | 0.298 |
| *LEV* | 0.059 | 0.663 | 0.507 |

Also, CEO overconfidence at the time of multiplying book value per share, negative and significant relationship (with the significant level of 0.018) with the stock price and at the time of multiplying the earnings per share, negative and significant relationship (with the significant level of 0.011), at confidence level 95%. So, it can be argued that the first condition of Baron and Kenny (1986) and the first hypothesis of this study based on the effect of CEO overconfidence on value relevance is confirmed.

The regression results of CEO overconfidence on cost stickiness (second condition) are presented in table 4.

The calculated tables in table 4 show that the regression model is important. The determination coefficient also shows that the above model expresses about 56% of the change in costs. The Watson camera statistic also indicates that there is no first-order serial autocorrelation model. Regarding the calculated coefficients for each of the explanatory variables and their significance level, the CEO overconfidence variable with 0.000 meaningfulness level has a positive and significant relationship with cost changes (95% confidence level) at 95% confidence level. Also, the CEO overconfidence at the time of sales decline has a negative and significant relationship (with a significance level of 0.000) with cost changes. That is, overconfident CEOs are more reluctant to reduce costs when sales decline. Therefore, it can be argued that the second condition of Baron and Kenny (1986) and the second hypothesis of this study, that there is a relationship between CEO overconfidence and cost stickiness are confirmed.



**Table 5.** Regression results of the effect of CEO overconfidence through cost stickiness on value relevance

| Explanatory variable | Coefficients | T Statistics | Probability |
|---|---|---|---|
| *C* | 0.084 | 0.726 | 0.467 |
| *BVP* | 0.054 | 2.112 | 0.035 |
| *EPS* | 0.102 | 5.387 | 0.000 |
| *OVER* | -0.018 | -6.889 | 0.000 |
| *BVPOVER* | -0.308 | -6.902 | 0.000 |
| *EPSOVER* | -0.028 | -8.211 | 0.000 |
| *CostStick* | 0.087 | 3.933 | 0.000 |
| *BVPCostStick* | 0.105 | 1.040 | 0.298 |
| *EPSCostStick* | 0.221 | 0.663 | 0.507 |

The calculated tables in table 5 show that the regression model is significant. The determination coefficient also shows that the above model expresses about 57% of the stock price change. The Watson camera statistic also indicates that there is no first-order serial autocorrelation model. Regarding the coefficients calculated for each of the explanatory variables and their significance level, the CEO overconfidence variable has a significant negative relationship with the stock price, with a coefficient of -0.018 and a significant level of 0.000 at 95% confidence level. Also, CEO overconfidence at the time of multiplying the book value of each share, negative and significant relationship (with the significant level of 0.000) with the stock price and at the time of multiplying the profit per share, the negative and significant relationship (with the significant level of 0.000), at the level confidence 95 % that this significance is increased. Therefore, it can be stated that the third condition of Baron and Kenny (1986) and the third hypothesis of this study are not confirmed.

## 5. Results and suggestions

CEO overconfidence is one of the new issues in the behavioral-finance area. The subject mentioned that CEO overconfidence is that the overwhelming psychological bias and overconfidence among managers, especially senior executives, make them overly hopeful and reluctant to expose. Complete loss-making projects of the company because they believe that they will be covered in the future by their poor performance based on their overconfidence. In this way, they can create value for the company and increase shareholder wealth. Many psychologists have argued that overconfidence depends on one's ability to process information and provide two reasonable interpretations. First, they

do not use inferential methods sufficiently, and they use their information experience to confirm one possible answer. When they discover the answer to a question, they look for experiences that confirm or reject it. At this time, memory calling processes can access information to confirm their initial conclusions. Second, these people believe that the information stored in their memory is sufficient to decide and select an answer and does not require an inference process. Although both the agency and the CEO's overconfident tend to avoid eliminating the extra costs of distribution and sales (as opposed to the agency problem where the extra costs are held for opportunistic reasons); the CEO's overconfident believe that they do the best in regard of interests of shareholders and therefore save additional costs. Therefore, it can be said that CEO overconfidence affects cost stickiness. Therefore, cost stickiness can also influence value relevance by affecting CEO overconfidence. In this study, the conclusion of the first hypothesis test showed that there is a negative and significant relationship between CEO overconfidence and value relevance, it means the more overconfident CEOs is due to over-reliance on their abilities and adopting wrong investment policies, financing, etc. the less value and stock prices. The second hypothesis test showed a positive and significant relationship between CEO overconfidence and cost stickiness. One of the reasons is overconfident CEOs avoid eliminating surplus costs while sale declines. But the third hypothesis of this study that the mediating variable effect of cost stickiness on CEO overconfidence and value relevance was not confirmed. The findings of this study are generally consistent with the results of Xue and Hong (2016), Banker et al. (2013), and Bo et al. (2015). Board members are the most important users of this study because they can effectively select managers and provide necessary guidance for overconfident CEOs to perform their stewardship tasks better. The findings of this study are generally consistent with the conclusion of Xue and Hong (2016), Banker et al. (2013), and Bo et al. (2015). Board members are the most important users of this study because they can effectively select managers, provide necessary guidance to overconfident CEOs, and perform their stewardship tasks better. Also, given the direct impact of the CEO overconfidence on cost stickiness, it is difficult to predict operating costs in firms with overconfident CEOs compared to other companies, resulting in poor earnings prediction accuracy. So securities and stock exchange organizations are suggested to adopt appropriate strategies to expose this behavioral category effectively. Given the stickiness of costs and because auditors implicitly assume that costs vary with the volatility of sales when performing analytical techniques, understanding the phenomenon of stickiness and the relationships that exacerbate the phenomenon gives a better understanding to the auditor of how costs are changing and help the auditors to improve the performance of analytical models, so it is recommended that auditors pay attention to the results of this study. Besides, analysts and users of financial statements are advised to pay more attention to CEO overconfidence and cost stickiness in their analyses and applications. Researchers are suggested in future research to examine the role of company size, information asymmetry, and conservatism on the relationship between overconfidence and value relevance. In addition, it is proposed that this investigation be investigated in different fields of industry.

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