

The impact of managerial overconfidence on accounting conservatism: Empirical study

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Abstract

This study aims at investigating the effect of managerial overconfidence on accounting conservatism. Based on a convenient sample of 125 companies drawn from Egyptian listed companies' qualified population for a period from 2012 to 2017 to constitute 750 firm observation. The study provides empirical evidence that overconfident managers are less likely to issue conservative financial reports. Thus, they tend overstate reported income compared with less overconfident managers.

Keywords

Managerial overconfidence – accounting conservatism – conditional conservatism

1. Introduction

Managers play critical role in determining firms reporting behavior, through their discretion over daily decision and periodical reporting of firm outcomes. One of the most important accounting convention that attains consideration from all users as well as from regulators is accounting conservatism, which is also affected by managers' behavior and discretion. FASB concept number 2 issued in 1980 quoted APB opinion number 4:

“Frequently, assets and liabilities are measured in a context of significant uncertainties. Historically, managers, investors, and accountants have generally preferred that possible errors in measurement be in the direction of understatement rather than overstatement of net income and net assets.

This has led to the convention of conservatism. .” [paragraph 171].

Conventionally, conservatism is defined as anticipating no profits, but anticipating all losses (Bliss (1924) cited by Watts (2003)), which means not to recognize profits before the existence of verifiable legal claim to the revenues generating those profits. However, by the issuance of FASB concept number 2 “Conservatism no longer requires deferring recognition of income beyond the time that adequate evidence of its existence becomes available or justifies recognizing losses before there is adequate evidence that they have been incurred” [paragraph 95].

Accounting conservatism is defined as asymmetric timeliness in news recognition; conservatism is interpreted by Basu (1997) as capturing accountants' tendency to require higher degree of verification for recognizing good news than bad news in financial statements.

Beaver and Rayan (2005) argued that accounting conservatism is classified into two main types. First, Conditional conservatism (also

known as “ex post” or “news dependent”), meaning that book values are written down under sufficiently adverse circumstances but not written up under favorable circumstances, e.g. lower of cost or market accounting for inventory and impairment accounting for long-lived tangible and intangible assets. Second, unconditional conservatism (also known as “ex ante” or “news independent”), meaning that aspects of the accounting process determined at the inception of assets and liabilities yield expected unrecorded goodwill, e.g., immediate expensing of the costs of most internally developed intangibles, accelerated depreciation of property plant and equipment, and historical cost accounting for positive net present value projects.

Accounting conservatism is presumed to capture effects of managerial incentives on reported earnings (Christensen et al., 2015). In theory, given the opportunistic behavior of management to achieve bonus plans and debt covenants requirements, accounting conservatism is argued to aid in efficient contracting between the firm and stakeholders (i.e. shareholders and debt providers), as conservatism restrict the ability of managers to use income and net assets increasing accounting methods (Deegan, 2013). Also, Zhang (2008) suggests that managers might adopt conservative accounting methods because they allow them to attract debt at a lower cost.

Conservatism, also, can reduce litigation risk as litigation is much more likely to be generated by overstatement rather than understatement of earnings and net assets. In addition conservatism has income tax explanation as companies prefer to defer income to reduce the present value of income taxes (Watts, 2003).

FASB concept statement number 8 issued in 2010 does not incorporate conservatism as an aspect of faithful representation, arguing it would be inconsistent with neutrality. However, in practice accounting standards include many conservative accounting choices and methods e.g., lower of cost or market and impairment of assets.

Prior literature has examined the determinants, incentives, pros, and cons of accounting conservatism. One of the factors affecting level of accounting conservatism is managerial overconfidence. The term overconfidence might seem difficult to define. It is often used as an umbrella term for a variety of phenomena. At its hearts seems to be the notion that people tend to be optimistic in situations of uncertainty (Margolin, 2012). However, the behavioral corporate finance literature draws a distinction between optimism and overconfidence. Optimism is defined as a subjective overvaluation of the likelihood of favorable future events, while overconfidence relates to underestimation of the risk or variance of future events (DeLong et al., 1990; Goel and Thakor, 2008; Fairchild, 2009). A considerable number of studies investigated the effect of managerial overconfidence on financial reporting behavior and found a negative relation between CEO overconfidence and accounting conservatism (Ahmed and Duellman, 2013; Hwang et al., 2015), while Hasanikolavani and Mahfoozi (2015) documented a positive relation between managerial overconfidence and unconditional conservatism. However, the effect of managerial overconfidence on accounting conservatism is not explored in Egypt.

Accordingly, the main research question of the current study can be stated as follows: **“What is the relation of managerial overconfidence with accounting conservatism?”**

2. Research objective

The main objectives of this study is to investigate the relation between managerial overconfidence and accounting conservatism.

3. Research importance

This study contributes to the extant literature in two ways

- 3.1. This study adds to the literature by investigating the effect of managerial overconfidence on accounting conservatism in Egypt as an emerging market.
- 3.2. The expected result of this study may help the users to partially understand why firms' acts the way they do.

4. Literature Review and Hypotheses Development

The relation between managerial overconfidence and accounting conservatism could be positive or negative; the literature provides an interpretation for both directions. One cause of possible positive relation between overconfidence and accounting conservatism is the ability of the board of directors to identify overconfident managers and require them to use conservative reporting to offset the adverse effects of overconfidence on financial reporting (Ahmed and Duellman, 2013).

Gervais et al (2011) predicts that overconfident managers are more likely to be attracted by highly performance-sensitive compensation contracts offered by risky, undiversified, growing firms. Graham et al (2012) find that CEOs who are younger and more confident are more likely to run growing companies, that is another explanation for a possible positive relation between managerial overconfidence and accounting conservatism, because growing firms tends to have more conservative reporting (Ahmed and Duellman, 2013).

Ahmed and Duellman (2013) hypothesized that if overconfident managers overestimate future returns from their firms' projects, they are likely to delay the recognition of losses, furthermore, even when they choose to recognize losses, they are more likely to underestimate the value of these losses and use less conditionally conservative accounting. Moreover, overconfident managers are more likely to overvalue assets and undervalue liabilities. For example, an overconfident manager overestimates the likelihood of the collection of accounts receivable and therefore understates the allowance for doubtful accounts, thus overstating net accounts receivables. Similarly, overconfident manager tends to overestimate the salvage values or useful life of fixed assets, therefore, overstating net assets. Such overstatements imply lower unconditional conservatism.

Ahmed and Duellman (2013) examined effects of overconfidence on both conditional and unconditional accounting conservatism. They found evidence of a significant negative relation between overconfidence and both conditional and unconditional conservatism. Also, Hwang et al. (2015) investigated whether overconfident CEOs tend to delay loss recognition and use less conservative accounting practices. They obtained a negative relationship between CEO overconfidence and accounting conservatism. The results of Ramsheh and Molanzari (2014) indicate a negative relationship between managerial overconfidence and both the conditional and unconditional conservatism. In addition, the results provide evidence to the effect that external monitoring appears to mitigate the negative effect of overconfidence on conditional conservatism, but do not appear to have the same effect on unconditional conservatism

In contrast to the previously mentioned studies, Hasanikolavani and Mahfoozi (2015) investigated the relation between managerial overconfidence and accounting unconditional conservatism. They found positive relation between unconditional conservatism and managerial overconfidence. In other words, overconfidence features in managers' causes' unconditional conservatism in financial reporting process. However, in this study I confine my analysis to conditional conservatism because unconditional conservatism is related to managers' choice of accounting methods at the inception of assets, and managers have not absolute flexibility to change these methods, since it requires auditors' acceptance.

The study hypothesis can be formulated as follows

Managerial overconfidence is not related to conditional conservatism.

5. Method

5.1. Sample selection:

The population of the study includes all Egyptian corporations listed in the Egyptian stock exchange which amount to 224 companies as of October 1, 2018. Excluded are the banking sector (11 companies), financial services sector (37 companies), companies listed subsequent to 2010 to ensure date availability (25 companies), firms with inactive share trading price (5 companies) as share trading price will be used in measuring accounting conservatism, and companies that use US Dollar as their functional currency (6 companies), this end up with 140 companies "qualified population". A convenient sample of 125 companies is drawn from this qualified population for a period from 2012 to 2017. Table (1) shows a summary of qualified population and the sample composition.

Table (1)
Qualified population and sample composition

Qualified population		number of companies in sample	% in sample
Sector	Number of companies qualified		
Basic resources	8	7	0.056
Chemicals	7	7	0.056
Construction and materials	20	19	0.152
Food and beverage	23	21	0.168
Healthcare and pharmaceuticals	12	10	0.08
Industrial goods and services and automobiles	15	13	0.104
Oil and gas	2	2	0.016
Personal and household products	9	8	0.064
Real estate	24	19	0.152
Retail	4	4	0.032
Media	1	1	0.008
Technology	2	2	0.016
Telecommunications	3	2	0.016
Travel and leisure	9	9	0.072
Utilities	1	1	0.008
Total	140	125	1

5.2. Regression Model

This relationship is estimated as follows:

$$\begin{aligned} \text{CONSERVATISM}_{it} = & \beta_0 + \beta_1 \text{OVERCON}_{it-1} + \beta_2 \text{MTB}_{it} + \beta_3 \text{LEV}_{it} \\ & + \beta_4 \text{SIZE}_{it} + \beta_5 \text{SALESGROWTH}_{it} + \beta_6 \text{CFO}_{it} + \beta_7 \sigma \\ & \text{Rev}_{it} + \epsilon \dots \dots \dots (1) \end{aligned}$$

Table (2) introduces operational definition of model variables.

Table (2): Operational definition of model variables

Dependent variable	
Conservatism_{it}	Accounting conservatism (to be defined later).
Independent variable	
Overcon_{it-1}	Managerial overconfidence in year t-1(to be defined later).
Control variables:	
MTB_{it}	Market value of equity divided by book value of equity.
LEV_{it}	Total debt divided by total assets
SIZE_{it}	The natural log of total assets at the end of year t.
SALESGROWTH_{it}	The percentage of annual growth in total sales.
CFO_{it}	Cash flows from operations deflated by total assets.
σ Rev_{it}	the standard deviation of the natural log of revenues measured from t-5 to year t-1

5.3. Independent and dependent variables definitions

5.3.1. Independent variable: Managerial Overconfidence:

Different measures of overconfidence are used in the literature. These measures can be classified into: **(first)** option-based measures¹, and **(second)** investment-based measures (Campbell et al., 2011; Schrand and Zechman, 2012; Hirshleifer et al., 2012; Hribar and Yang, 2015; Ahmed and Duellman, 2013). This study uses investment-based measures, because of the availability of data required to apply these measures in the Egyptian environment.

¹ Option-based measure developed by Malmendier and Tate (2005), depends upon overconfident CEOs being more likely to delay exercising options, as they argue that overconfident CEOs overestimate the returns from their investment projects and hence overestimate the increase of their firms' value.

Overconfidence investment-based measure following Schrand and Zechman (2012:8) equals one if the firm's capital expenditures deflated by lagged total Assets are greater than the industry median of that year, zero otherwise.

5.3.2. Dependent variables: Accounting conservatism

This study follows the model developed by Basu's (1997) of asymmetric timeliness measure

$$X_{it} / P_{it-1} = \alpha + \beta_1 DR_{it} + \beta_2 R_{it} + \beta_3 (R_{it} * DR_{it}) + \varepsilon_{it} \dots \dots \dots (2)$$

Where

- X_{it} : is the earnings per share for firm i in fiscal year t.
- P_{it-1} : is the price per share at the beginning of the fiscal year.
- R_{it} : is the return on firm i from 9 months before fiscal year t-end to three months after fiscal year t-end .
- DR_{it} : is a dummy variable; = 1 if $R_{it} < 0$, and 0 otherwise.
- The interaction slope coefficient β_3 , measures the difference in sensitivity of earnings to negative and positive returns.
- Accounting conservatism is measured by $AT = (\beta_2 + \beta_3) / \beta_2$, with expected value greater than one

In order to estimate each firm level of conservatism, this study follows the Khan and Watts (2009) G-score and C-score adjustment where

$$G\text{-Score} = \beta_2 = \mu_1 + \mu_2 \text{Size}_i + \mu_3 \text{MTB}_i + \mu_4 \text{Lev}_i \dots \dots \dots (3)$$

$$C\text{-Score} = \beta_3 = \lambda_1 + \lambda_2 \text{Size}_i + \lambda_3 \text{MTB}_i + \lambda_4 \text{Lev}_i \dots \dots \dots (4)$$

Where, G-score refers to timeliness of good news, C-score refers to incremental timeliness of bad news which is used as firm year measure of conservatism. Size is the natural log of market value of equity, MTB

is the ratio of market value of equity to book value of equity at the end of the year, and Lev is total debt divided by market value of equity.

By substituting equation (3) and equation (4) into equation (2) and adding control variables, the following model obtains:

$$\begin{aligned}
 X_{it}/ P_{it-1} = & \alpha + \beta_1 DR_{it} + (\mu_1 + \mu_2 Size_i + \mu_3 MTB_i + \mu_4 Lev_i) R_{it} + (\lambda_1 + \lambda_2 Size_i \\
 & + \lambda_3 MTB_i + \lambda_4 Lev_i) (R_{it} * DR_{it}) + (\sigma_1 Size_i + \sigma_2 MTB_i + \sigma_3 Lev_i + \\
 & \sigma_4 DR_{it} Size_i + \sigma_5 DR_{it} MTB_i + \sigma_6 DR_{it} Lev_i) + \\
 & \varepsilon_{it} \dots \dots \dots (5)
 \end{aligned}$$

The additional variables included in the last pair of parenthesis are needed because regression model (5) includes interaction variables, therefore they are added to control for the main effects.

6. Empirical Findings

6.1. Descriptive Statistics

Table (4) provide the descriptives for model variables. While table (3) presents the proportions for dummy variables.

The mean of conservatism is 0.0125 with standard deviation of 0.556 and falls between -1.012 and 1.023. With regard to the independent variable (managerial overconfidence) 51.8% of the sample observations are classified as having overconfidence compared to 48.2 % not having overconfidence. As to control variables, about 34.8% of the sample observations are audited by big four and 65.2% are audited by non-big four auditors, also 41.12% of sample observation are classified as having audit tenure compared with 58.88% do not have audit tenure.

The mean size (log assets) is 8.777 which falls between 7.780 and 9.901. Return on assets mean is 0.048 which falls between -0.111 and

0.199. Log operating cycle mean is 2.237 which falls between 1.243 and 3.123. Cash flow from operations mean is 0.054 with a minimum of -0.135 and a maximum of 0.321.

The mean of market share is 6.9% which falls between 0.1% and 48.1%. Institutional ownership mean is 57.2% with a standard deviation of 30.5% and a maximum of 96.4%. The mean of market to book ratio is 1.114 with a standard deviation of 0.847 and a minimum of 0.054 and maximum of 3.307. Net operating assets mean is 89.6% and falls between 64% and 99.8%.

Sales growth mean is 15.2% with a minimum of -51.8% and a maximum of 112%. The mean of tangible assets is 43.6% and falls between 4.3% and 87.9% of total assets.

Table 3: Proportions of dummy variables:

	OVERCON_{it-1}	SAF_{it}	TENURE_{it}
Proportion of 1	.518024	.3484646	.411215
Proportion of 0	.481976	.6515354	.588785

Table 4: Descriptive statistics for model variables

Variable	Mean	Std. dev.	Min.	Max.
CONSERVATISIM_{it-1}	0.0125	0.556	-1.012	1.023
MTB_{it}	1.098	0.814	0.054	3.228
LEV_{it}	0.419	0.231	0.061	0.875
SIZE_{it}	8.756	0.579	7.772	9.862
SALESGROTH_{it}	0.152	0.394	-0.518	1.121
CFO_{it}	0.046	0.095	-0.135	0.257
σREV_{it}	0.141	0.134	0.022	0.529

6.2.2. Correlation Matrix

Pearson correlation is used to test the correlations among all variables of the study models. The correlation results mainly are used to get some initial insights into the data and provide an indication about the multicollinearity problem, however, multicollinearity problem will be investigated later using the variance inflation factor. Table (5) provides correlation coefficients for variables included in the model.

A negative correlation between overconfidence and accounting conservatism is noticed, suggesting that overconfident managers do not tend to adopt conservative reporting. Also, there is no indicator of multicollinearity between independent variables.

6.3. Regression Models for Testing Hypotheses

Three common models are used to analyze panel data. **First**, Pooled Ordinary Least Squares (Pooled OLS). **Second**, Firm Fixed Effects Model (FFE). **Third**, Random Effects Model (RE) (de Jager, 2008; Park, 2011). To identify the appropriate model, various tests have been performed using STATA software as follows (Park, 2011):

- **Pooled OLS vs. RE:** Breusch-Pagan Lagrangian multiplier test for random effects. The null hypothesis is that the variance of the random effect is zero. If the null hypothesis is not rejected, pooled OLS is the appropriate model. Table (6) present the test results. Based on this test Pooled OLS will be used to estimate the regression model.

Table 6: Results of the suitable model choice tests

Test value	P-value	The relevant model
0.00	1	Pooled

Table 5: Pearson correlations

Correlation	CONSERVATISIM_{it}	OVERCON_{it-1}	MTB_{it}	LEV_{it}	SIZE_{it}	SALESGROTH_{it}	CFO_{it}	σREV_{it}
CONSERVATISIM_{it}	1.000							

OVERCON_{it-1}	-0.118	1.000						
	0.001	-----						
MTB_{it}	0.095	0.004	1.000					
	0.011	0.911	-----					
LEV_{it}	-0.096	0.000	-0.173	1.000				
	0.010	0.992	0.000	-----				
SIZE_{it}	-0.134	0.120	-0.039	0.065	1.000			
	0.000	0.001	0.296	0.080	-----			
SALESGROTH_{it}	0.065	0.036	0.020	0.007	-0.058	1.000		
	0.081	0.330	0.598	0.854	0.120	-----		
CFO_{it}	0.030	0.038	0.164	-0.287	0.232	-0.019	1.000	
	0.427	0.306	0.000	0.000	0.000	0.606	-----	
σREV_{it}	0.020	-0.003	-0.021	-0.079	-0.096	0.201	-0.057	1.000
	0.589	0.945	0.580	0.034	0.010	0.000	0.125	-----

6.4. Model Validation

The validation tests for the model of this study (i.e. linearity, normality, multicollinearity, Heteroscedasticity and autocorrelation) are presented below.

6.4.1. Linearity

Ramsey reset test using powers of the fitted values of dependent variables is used to check the linearity for the study models. With a null hypothesis “ model has no omitted variables”, the assumption of linearity is satisfied if the null hypothesis of linearity is not rejected. Table (7) presents the results of this test which specify that the linear model is suitable for the data of the study models.

Table 7: Results of Ramsey’s RESET for linearity

Ramsey’sRESET		Decision	Linearity
F	Prob> F		
1.61	0.186	H₀ cannot be rejected	Yes

6.4.2. Normality

The residuals of each regression model are tested for normality. Table (8) presents the results of the skewness / kurtosis test for normality. With a null hypothesis: residuals are normally distributed, the assumption of normality is satisfied if the null hypothesis of normality is not rejected.

Results of normality test in Table (8) indicates that the residuals of are normally distributed (Ayyangar, 2007).

Table8: Results of skewness/kurtosis normality test

skewness/kurtosis		Decision	Normality
Chi ²	Prob.		
0.34	0.844	H₀ cannot be rejected	Yes

6.4.3. Multicollinearity

The simplest diagnostic test of multicollinearity problem is to use the correlation coefficients. Generally if the correlation coefficient between two variables is more than 0.9 (Hair et al., 2010), this represents an indicator of substantial multicollinearity. As presented earlier in this chapter the correlation matrix between variables provides no suspicions of multicollinearity. Moreover, the variance inflation factor is also used to check for multicollinearity for each model. Hair et al. (2010) mention that a large VIF value (10 or above) indicates high collinearity. Tables (9) presents the results of VIF. The VIF value for all variables are less than 10, which indicate that multicollinearity problem is not present.

Table 9: Variance Inflation Factor

Variable	CONSERVATISM
	VIF
OVERCON _{it-1}	1.02
MTB _{it}	1.05
LEV _{it}	1.14
SIZE _{it}	1.11
SALESGROTH _{it}	1.05
CFO _{it}	1.20
σREV _{it}	1.06

6.4.4. Heteroscedasticity

Heteroscedasticity occurs when the residuals have non-constant variance. To test for heteroscedasticity, this study uses Breusch-Pagan / Cook-Weisberg test, with a null hypothesis: constant variance, the assumption of homoscedasticity is satisfied if the null hypothesis is not rejected. Table (10) presents the results of this test, which indicates that the heteroscedasticity problem is not present in the study model.

Table 10: Results of Breusch-Pagan / Cook-Weisberg test

Chi² Statistic	Prob.	Decision	Heteroscedasticity
1.49	0.223	H₀ cannot be rejected	No

6.4.5. Autocorrelation

Another assumption of OLS regression is that error terms are not correlated, when they are correlated, autocorrelation problem exist. The Wooldridge test is used to check for autocorrelation, with a null hypothesis: no first order correlation exists. If the null hypothesis is not rejected, this means autocorrelation problem does not exists. Table (11) presents the results of this test.

Table 11: Results of autocorrelation test

Wooldridge test		Decision	autocorrelation
F statistic	Prob.		
60.154	0.000	H₀ rejected	Yes

regression model will be estimated using pooled data and as a robust it will be estimated using RE model with clustered robust standard errors are used to correct for autocorrelation (not tabulated).

7. Multiple Regression Analysis

Table (12) reports the results of regression model. The model is significant as the Wald chi²test statistic equals(36) with a probability less than (0.001), the explanatory power of the model (R²) equals(4.8%). The model shows that managerial overconfidence negatively affects accounting conservatism with a coefficient of (-0.128) and a probability of (0.004).

With regard to control variables, firm size negatively affects the level of accounting conservatism with a coefficient of (-0.119) and a probability of (0.001), which indicate that large firms are less likely to use conditional

conservatism. Finally, all other variables do not effect accrual earnings management as their probabilities are higher than 0.05. However, market to book ratio is positively related to accounting conservatism with a coefficient of (0.021) and a probability of (0.056). Also, leverage and sales growth are negatively related to accounting conservatism with coefficients of (-0.122 and -0.000 respectively) and probabilities of (0.082 and 0.094 respectively).

Table 12: Model results

Dep. Variable	Conservatism	
Indep. Variables	Coeff.	Prob.
Constant	1.121	0.000
OVERCON_{it-1}	-0.128	0.004
MTB_{it}	0.021	0.056
LEV_{it}	-0.122	0.082
SIZE_{it}	-0.119	0.001
SALESGROTH_{it}	-0.00	0.094
CFO_{it}	0.147	0.423
σREV_{it}	-0.007	0.857
N	718	
R-squared	0.0483	
Wald chi²	36.00	
Prob.(Wald chi²)	0.000	

8. Discussion and conclusion

The results indicate that managerial overconfidence negatively affect accrual accounting conservatism (conditional conservatism), indicating a rejection of hypothesis (H2) stating that “Managerial overconfidence is not related to conditional conservatism”. Therefore, it could be concluded that overconfident managers are less likely to issue conservative financial reports. Thus, they tend overstate reported income compared with less overconfident managers.

This result is consistent with the findings of Ahmed and Duellman (2013), Ramsheh and molanzari (2014) and Hwang et al. (2015), who reported a negative relation between managerial overconfidence and conditional conservatism.

This result is in congruence with the results of real earnings management and accrual earnings management (not presented in this paper). Generally managers tent to increase current year reported income either through:

- Real activities earnings management,
- Accrual earnings management,
- Less conditional conservatism.

References:

- Ahmed, A. S., and Duellman, S. (2013). Managerial overconfidence and accounting conservatism. *Journal of Accounting Research*, 51(1), 1-30.
- Ayyangar, L. (2007). Skewness, Multicollinearity, Heteroskedasticity-You Name It, Cost Data Have It! Solutions to Violations of Assumptions of Ordinary Least Squares Regression Models Using SAS®. *SAS Global Forum 2007*.
- Basu, S. (1997). The conservatism principle and the asymmetric timeliness of earnings 1. *Journal of Accounting and Economics*, 24(1), 3-37.
- Beaver, W. H., & Ryan, S. G. (2005). Conditional and unconditional conservatism: Concepts and modeling. *Review of accounting studies*, 10(2-3), 269-309.
- Campbell, T. C., Gallmeyer, M., Johnson, S. A., Rutherford, J., and Stanley, B. W. (2011). CEO optimism and forced turnover. *Journal of Financial Economics*, 101(3), 695-712.
- Christensen, H. B., Lee, E., Walker, M., & Zeng, C. (2015). Incentives or standards: What determines accounting quality changes around IFRS adoption?. *European Accounting Review*, 24(1), 31-61.
- Dal Magro, C. B., Gorla, M. C., and Klann, R. C. (2018). Overconfident chief executive officer and earnings management practice. *Scientific Editorial Board*, 17(50), 52-67.
- De Jager, P. (2008). Panel data techniques and accounting research. *Meditari Accountancy Research*, 16(2): 53–68.
- De Long, J. B., Shleifer, A., Summers, L. H., and Waldmann, R. J. (1990). Noise trader risk in financial markets. *Journal of Political Economy*, 98(4), 703-738.
- Deegan, C. (2013). *Financial accounting theory*. McGraw-Hill Education Australia.

- Fairchild, R. (2009). Managerial overconfidence, moral hazard problems, and excessive life cycle debt sensitivity. *Investment Management and Financial Innovations*, 6(3), 35-42.
- Ferreira, M. P. (2017). Overconfidence in Finance: Overview and Trends. In *Handbook of Investors' Behavior During Financial Crises* (pp. 101-112). Academic Press.
- Financial Accounting Standards Board (FASB). (2010). Conceptual Framework for Financial Reporting. Chapter 1, "The Objective of General Purpose Financial Reporting," and Chapter 3, "Qualitative Characteristics of Useful Financial Information (a replacement of FASB Concepts Statements No. 1 and No. 2)." Statement of Accounting Concepts No. 8.
- Gervais, S., Heaton, J. B., and Odean, T. (2011). Overconfidence, compensation contracts, and capital budgeting. *The Journal of Finance*, 66(5), 1735-1777.
- Goel, A. M., and Thakor, A. V. (2008). Overconfidence, CEO selection, and corporate governance. *The Journal of Finance*, 63(6), 2737-2784.
- Graham, J. R., Harvey, C. R., and Puri, M. (2013). Managerial attitudes and corporate actions. *Journal of Financial Economics*, 109(1), 103-121.
- Graham, J. R., Li, S., & Qiu, J. (2012). Managerial attributes and executive compensation. *The Review of Financial Studies*, 25(1), 144-186.
- Hair, J. F., Black W.C., Babin B. J., Anderson R. E. (2010). *Multivariate Data Analysis*. 7th Edition, London: Prentice Hall.
- Hasanikolavani, Z., & Mahfoozi, G. (2015). Investigating the relation between managerial overconfidence and unconditional conservatism in accepted companies in Tehran's stock exchange. *International Journal of Review in Life Sciences*, 5(7), 128-133.
- Hirshleifer, D., Low, A., and Teoh, S. H. (2012). Are overconfident CEOs better innovators?. *The Journal of Finance*, 67(4), 1457-1498.

- Hribar, P., and Yang, H. (2015). CEO overconfidence and management forecasting. *Contemporary Accounting Research*, 33(1), 204-227.
- Hwang, K., Cha, M., & Yeo, Y. (2015). Does managerial overconfidence influence on financial reporting?: The relationship between overinvestment and conditional conservatism. *Review of Integrative Business and Economics Research*, 4(1), 273.
- Malmendier, U., and Tate, G. (2005). CEO overconfidence and corporate investment. *The Journal of Finance*, 60(6), 2661-2700.
- Margolin, M. (2012). Managerial overconfidence and education—insights from dual process theory. *Master Thesis*, University of Mannheim
- Park, H. M. (2011). Practical guides to panel data modeling: A step by step analysis using Stata. *Public Management and Policy Analysis Program, Graduate School of International Relations, International University of Japan* 1–52.
- Ramsheh, M., & Molanzari, M. (2014). Managerial overconfidence and accounting conservatism. *Journal of Accounting Knowledge*, 16(5), 55-79 [In Persian].
- Schrand, C. M., and Zechman, S. L. (2012). Executive overconfidence and the slippery slope to financial misreporting. *Journal of Accounting and Economics*, 53(1), 311-329.
- Watts, R. L. (2003). Conservatism in accounting part I: Explanations and implications. *Accounting horizons*, 17(3), 207-221.
- Zhang, J. (2008). The contracting benefits of accounting conservatism to lenders and borrowers. *Journal of Accounting and Economics*, 45(1), 27-54.