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## RESEARCH ARTICLE

# Deviation from Industry Norms, Financial Restatements and Audit Opinion

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## Abstract

While prior research examines the internal and external factors that influence financial statement restatement and external auditor's opinion, there is limited research on the impact of deviation from industry norms (DIN) on financial restatements and audit opinion. This study attempts to fill this gap by examining whether and how DIN affects financial restatements and audit opinion. Industry-level risk factors calculate DIN, including annual stock returns, daily return variations, financial distress and leverage. Using a sample of Iranian listed firms (194 firms) between 2014 and 2021, this study documents a significant and positive relationship between DIN with financial restatements and audit opinion, suggesting that firms with higher DIN have higher restatements and are more likely to receive a modified opinion. This paper offers the first empirical research about the consequences of DIN on the restatements and audit opinion at the international level, going beyond the role of firm-, auditor-, and governance- specific characteristics.

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## 1. Introduction

Financial restatements indicate the failure of financial reporting quality, which raises concerns regarding the reliability of the financial reporting environment (Yu-Ho and Sun, 2014; Al-Hadi et al., 2023). The U.S. Securities and Exchange Commission (SEC) considers financial restatement to be the most objective scale for measuring the misstatement of financial statements (Schroeder, 2001). On the other hand, external auditors validate the credibility of financial reports and are also responsible for detecting and reporting material misstatements in financial reports (Hong et al., 2023). Specifically, external auditors' reports are considered useful tools in the decision-making process of financial statement users. Therefore, identifying the factors affecting restatements and audit reporting is essential and requires more attention from scholars (MohammadRezaei et al., 2021).

While prior studies have investigated the determinants of financial restatement and audit opinion, there are limited studies on the consequences of deviation from industry norms (DIN) on the firm's financial restatements and auditors' opinion. This study extends the literature by investigating these issues. Specifically, this study tests two research questions:

**RQ1:** Is there a relationship between DIN and financial restatements?

**RQ2:** Is there a relationship between DIN and audit opinion?

In today's dynamic business environment, companies are under immense pressure to meet the expectations of their stakeholders. One of the most critical aspects is financial reporting, which provides a picture of a company's financial health. However, when companies deviate from industry norms, this can significantly impact the accuracy and reliability of financial reporting and audit risk (Alessandri and Khan, 2006; Rosser, 2017). Industry norms include a set of standards, practices, and criteria that are widely accepted and followed in a particular industry. These norms serve as a basis for evaluating a company's performance and financial health in its industry (Alessandri and Khan, 2006).

Specifically, deviation from these norms leads to multifold dimensions of risk such as strategic risk, market risk and returns variability (Alessandri and Khan, 2006). DIN may be intentional or unintentional and can be caused by strategic decisions, financial problems or efforts to gain a competitive advantage (Chatterjee et al., 1999; Alessandri and Khan, 2006). Chatterjee et al. (1999) argue that investors' expectations for company risk are based on the risk level in the same industry. Consistent with this, Gleason et al. (2008) find that financial restatement for one company results in a valuation rebate for companies in the same industry. Thus, DIN may lead to an uneven playing field, negatively affecting the industry.

If a company deviates from industry norms, public trust in the company may decrease, and competitors may easily compete with the company, leading to a decrease in the company's profits (Geletkanycz and Hambrick, 1997). In this regard, McNamara et al. (2003) state that DIN may result in shareholder losses, reduced patronage of institutions, or an increase in resource acquisition costs. Alessandri and Khan (2006) also find that firm market performance declines when managers follow strategies that deviate from industry risk norms. Moreover, prior research argues that earnings manipulation is one of the possible ways that the managers of such firms use to counteract career concerns and reduce the firm value (Kedia et al., 2015; Baginski et al., 2018), which can lead to an increase in audit risk (Rosser, 2017). In addition, DIN may lead to poor investment quality and accumulated firm risk (Alessandri and Khan, 2006). As a result, DIN is expected to increase the likelihood of the incidence of misstatements and the issuance of a modified audit opinion.

This study uses a sample of Iranian listed firms (194 firms) to test research questions between 2014 and 2021. Industry-level risk factors calculate DIN, including annual stock returns, daily return variations, financial distress and leverage. The results show that DIN is significantly and positively associated with financial restatements and audit opinion, suggesting that firms with higher DIN have

higher restatements and are more likely to receive a modified opinion.

This study contributes to the academic literature as follows. This study offers the first empirical research about the consequences of DIN on the firm's financial restatements and audit opinion at the international level, going beyond the role of firm-, auditor-, and governance-specific characteristics examined in prior research. It also extends prior research (Pratt and Stice, 1994; Calderon and Ofobike, 2007; Ke et al., 2015; Cairney and Stewart, 2019; Ostad Jafari et al., 2023) on the impacts of client industry characteristics on financial reporting and audit outcomes by examining whether a special type of potentially risky conduct by clients affects restatements and audit opinion. In addition, this study extends the literature on the consequences of DIN (Alessandri and Khan, 2006; Bjornsen et al., 2020) by exploring other potential channels (i.e., restatements and audit opinion). Hence, the findings of this study provide important insights for policymakers, investors, auditors and academics interested in understanding the factors affecting reporting strategies and audit risk. For instance, although auditing standards require auditors to consider risks relevant to the client's industry, the standards create little guidance to auditors on how industry-level information should influence the risk evaluation process and what types of industry-level information are likely to be significant. Thus, auditors may be encouraged to use industry norms as a substitute for standardized guidance, leading to improved audit quality.

Lastly, empirical evidence shows that about 70 percent of Iranian firms have restated their financial statements (Ghafelehbashi et al., 2022), while restatement of financial statements in other countries such as the United States, is about 9 percent (Blankley et al., 2012). This significant difference also applies to qualified audit opinions (MohammadRezaei et al., 2021), significantly affecting users' judgment and decision making. Thus, the results of this study increase our understanding by showing that client deviations from industry norms are likely a significant input in restatement and qualified audit opinion.

The rest of this paper is organized as follows. Section 2 frames the paper using the current literature and develops the hypothesis. The research design is described in section 3. Empirical findings and robustness tests are presented in sections 4 and 5, and section 6 concludes the paper.

## 2. Theoretical issues and hypotheses development

Restatement signifies that previous period financial statements are not correct and reliable (General Accounting Office, 2002; Wilson, 2008; Hong et al., 2023). Prior studies argue that financial restatements could indicate weakness in accounting and financial reporting systems and internal controls (Akhigbe et al., 2005; Plumlee and Yohn, 2010; MohammadRezaei et al., 2021). Thus, financial restatements may cause concerns regarding future financial statements' credibility (Zhang et al., 2018). Furthermore, prior research has demonstrated that financial restatements led to reduced firm value (Ahmed and Goodwin, 2007; He et al., 2019), a higher cost of capital and negative stock price reaction (Hribar and Jenkins, 2004; Chen et al., 2014), an increase in senior executive's turnover (Hennes et al., 2008), and a higher litigation risk (Bardos and Mishra, 2014). In addition, an extensive body of research in the last two decades has focused on the factors affecting audit opinions as capital markets react to the type of audit reports. Specifically, the modified opinion affects the decision of lenders and investors (DeFond et al., 2002). Hence, this study examines the determinants of financial restatements and audit opinion by investigating the role of deviation from industry norms (DIN).

Industry norms are standards that the providers of a particular product or service are obliged to follow at the industry level (Bjornsen et al., 2020). Over time, investors also accept these norms as a self-evident principle (Geletkanycz and Hambrick, 1997). However, deviating from industry norms may erode public trust in the company, leading to a loss of customers, investors, and other

stakeholders (Geletkanycz and Hambrick, 1997; McNamara et al., 2003). DIN can occur in various ways, such as using different accounting methods, failing to disclose relevant information, or manipulating financial statements to achieve a desired stock return (Alessandri and Khan, 2006; Bjornsen et al., 2020). Consequently, this study argues that DIN may influence financial restatements and audit reporting.

From a theoretical perspective, institutional theory elucidates that DIN can be detrimental to firm performance due to legitimacy challenges and reduced ability to access resources (Geletkanycz and Hambrick, 1997). Although managers may intentionally or unintentionally deviate from the norms, they may want to adhere to norms, but deviations from norms may be due to resource constraints (Alessandri and Khan, 2006). In addition, behavioral theory (Figenbaum and Thomas, 1986) explains that managers may pursue risky choices that deviate from current norms to reach high performance levels. As a result, despite potential legitimacy challenges and problems, managers may pursue strategies different from those of their competitors in the industry (Wiseman and Bromiley, 1996; Alessandri and Khan, 2006).

Furthermore, Deephouse (1999) states that firms need to conform to their industry peers for legitimacy. When a company deviates from industry norms, it can create confusion and uncertainty among stakeholders, especially investors who rely on financial statements to make informed investment decisions (Alessandri and Khan, 2006). Additionally, DIN may result in financial instability, as companies may be overvalued or undervalued, leading to potential market crashes or other financial crises (Chatterjee et al., 1999). Empirical evidence also shows that DIN is associated with poor market performance and less firm value (Alessandri and Khan, 2006). Abbott et al. (2004) argue that a weak financial situation will cause management to restate financial statements in the coming year(s).

To clarify, DIN may increase managerial incentives to demonstrate favorable performance through financial misstatements such as earnings manipulation, which may have implications for subsequent financial restatements (Flanagan et al., 2008). In line with this, Bardos and Mishra (2014) introduce management's desire to maintain or obtain favorable performance as one of the drivers of accounting errors and restated financial statements. Although the incidence of financial restatements is not always a sign of fraud and is placed in a spectrum from the correction of inadvertent mistakes to fraudulent reporting, it can easily be used to cover the management's fraudulent behavior (Plumlee and Yohn, 2010). Based on the above arguments, this study predicts that firms with higher DIN are more likely to restate financial statements. Hence, this study develops the following hypothesis:

**H1:** DIN and financial restatements have a positive and significant relationship.

The implications of DIN may also extend to audit risk and, ultimately, to audit outcomes (Rosser, 2017). Auditing standards require auditors to consider the risks of material misstatement when assessing audit risk, including risks related to the client's industry. Specifically, prior studies suggest that variability in industry risk influences audit outcomes (Al-Hadi et al., 2023). As previously discussed, DIN can compromise stakeholders' interests and strengthen the managerial motivations for detrimental actions, leading to higher agency costs. Accordingly, auditors are expected to issue a modified opinion for firms with high DIN because the possibility of violations and illegal acts is higher for such firms (Bjornsen et al., 2020). Therefore, the second research hypothesis is as follows:

**H2:** DIN and modified audit opinion have a positive and significant relationship.

### 3. Research design

#### 3.1 Sample and data

The initial sample includes all non-financial listed firms on the Tehran Stock Exchange for 2014–2021. The authors obtain the DIN, restatements, ownership structure, boards of directors, and firm characteristics data from financial statements and their notes provided on the comprehensive database of the Securities and Exchange Organization of Iran (CODAL<sup>1</sup>). Also, the authors obtained audit-related data from audit reports on CODAL. Firm-year observations that are missing the required data were excluded. The final sample consists of 1,552 firm-years and 194 unique firms. Notably, since the next year's audited information is needed to calculate restatement, observations of this variable are from 2014 to 2020 (1,358 observations). The authors removed the effects of outliers by winsorizing all continuous variables at the 1st and 99th percentiles.

#### 3.2 Research models and variables

To test Hypothesis 1 regarding the relationship between DIN and financial restatements, this study estimates the following Logit regression model:

$$\begin{aligned} Restate_{it} = & \alpha_0 + \alpha_1 DIN_{it} + \alpha_2 Ret_{it} + \alpha_3 Vol_{it} + \alpha_4 ZScore_{it} + \alpha_5 Lev_{it} + \alpha_6 Ln AT_{it} \\ & + \alpha_7 Profit_{it} + \alpha_8 Curr_{it} + \alpha_9 FCF_{it} + \alpha_{10} CF Vol_{it} + \alpha_{11} Rev Vol_{it} + \alpha_{12} Loss_{it} \\ & + \alpha_{13} AudBig_{it} + \alpha_{14} AudExp_{it} + \alpha_{15} AudRank_{it} + \alpha_{16} AudGen_{it} \\ & + \alpha_{17} AudTenure_{it} + \alpha_{18} ConOwner_{it} + \alpha_{19} InstOwner_{it} + \alpha_{20} MTenure_{it} \\ & + \alpha_{21} BInd_{it} + \alpha_{22} BSize_{it} + \alpha_j YearFE_{it} + \alpha_j IndustryFE_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

To examine Hypothesis 2 regarding the relationship between DIN and audit opinion, this study uses the following Logit regression model:

$$\begin{aligned} AudOpinion_{it} = & \alpha_0 + \alpha_1 DIN_{it} + \alpha_2 Ret_{it} + \alpha_3 Vol_{it} + \alpha_4 ZScore_{it} + \alpha_5 Lev_{it} + \alpha_6 Ln AT_{it} \\ & + \alpha_7 Profit_{it} + \alpha_8 Curr_{it} + \alpha_9 FCF_{it} + \alpha_{10} CF Vol_{it} + \alpha_{11} Rev Vol_{it} + \alpha_{12} Loss_{it} \\ & + \alpha_{13} AudBig_{it} + \alpha_{14} AudExp_{it} + \alpha_{15} AudRank_{it} + \alpha_{16} AudGen_{it} \\ & + \alpha_{17} AudTenure_{it} + \alpha_{18} ConOwner_{it} + \alpha_{19} InstOwner_{it} + \alpha_{20} MTenure_{it} \\ & + \alpha_{21} BInd_{it} + \alpha_{22} BSize_{it} + \alpha_j YearFE_{it} + \alpha_j IndustryFE_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

##### 3.2.1 Dependent and independent variables

The dependent variables are *Restate* and *AudOpinion*. *Restate* is a dummy variable set equal to 1 if the firm restated financial statements in the next year and 0 otherwise. *AudOpinion* is a dummy variable set equal to 1 if the firm received a modified opinion and 0 otherwise.

The independent variable is DIN. Following previous studies (Alessandri and Khan, 2006; Rosser, 2017), this study uses the sum of four risk factors, including the firm's stock return, daily stock return volatility, financial crisis, and leverage, which are related to the risk of deviation from industry norms. Accordingly, the following equation is used to calculate the DIN:

$$DevVar = \frac{(Var - median(Var_{jt}))}{median\_sd(Var_{it})_{jt}} \quad (3)$$

Where  $i$  indicates a firm,  $j$  indicates a code industry, and  $t$  shows the fiscal year. In addition,  $Var$

<sup>1</sup> www.Codal.ir

reflects each of the risk factors.  $Median\_std (Var)$  is also calculated with the following equation:

$$median\_sd (Var_{it})_{jt} = \frac{\sum |Var - median(Var_{jt})|^2}{n} \quad (4)$$

Using the above equations, this study creates a separate deviation measure for each risk factor by replacing  $Var$  in the equation with the appropriate risk factor. Specifically:

1)  $Var$  is replaced with  $Ret$  in Eq3.  $Ret$  is the firm's raw return for the year multiplied by -1. Then,  $DevRet$  is a dummy variable set equal to 1 if the obtained values by  $Ret$  are in the top tercile of the sample distribution by fiscal year and 0 otherwise.

2)  $Var$  is replaced with  $Vol$  in Eq3.  $Vol$  is the standard deviation of the firm's daily stock returns over the prior year. Next,  $DevVol$  is a dummy variable set equal to 1 if the obtained values by  $Vol$  are in the top tercile of the sample distribution by fiscal year, and 0 otherwise.

3)  $Var$  is replaced with  $ZScore$  in Eq3.  $ZScore$  is the firm's financial distress score, multiplied by a negative one. Estimated using Altman's (1968) model as modified by Shumway (2001):

$$ZScore = \left[ \frac{1.2 \times WC}{TA} + \frac{0.6 \times RE}{TA} + \frac{10.0 \times EBIT}{TA} + \frac{0.05 \times ME}{TL} - \frac{0.47 \times S}{TA} \right] \times [-1]$$

Where  $WC$  is current assets minus current liabilities,  $TA$  is total assets,  $RE$  is retained earnings,  $EBIT$  is earnings before interest and taxes,  $ME$  is the end-of-year share price times total common shares outstanding, and  $S$  is total revenue. Then,  $DevZScore$  is a dummy variable set equal to 1 if the obtained values by  $ZScore$  are in the top tercile of the sample distribution by fiscal year, and 0 otherwise.

4)  $Var$  is replaced with  $Lev$  in Eq3.  $Lev$  is the firm's total debt divided by total assets. Next,  $DevLev$  is a dummy variable set equal to 1 if the obtained values by  $Lev$  are in the top tercile of the sample distribution by fiscal year and 0 otherwise.

Finally, the deviation (DIN) equals the sum of  $DevRet$ ,  $DevVol$ ,  $DevZScore$ , and  $DevLev$  values. A higher deviation value indicates a greater deviation from industry norms.

### 3.2.2 Control variables

Following the literature on the determinants of financial restatement and audit opinion (Plumlee and Yohn, 2010; MohammadRezaei et al., 2021), the following control variables were used:

*Risk factors*: stock return ( $Ret$ ), daily stock return volatility ( $Vol$ ), financial crisis ( $Z-Score$ ), and leverage ( $Lev$ ), as defined in section 3.2.1.

*Firm size* ( $LnAT$ ): natural logarithm of the total assets.

*Firm profitability* ( $Profit$ ): net income divided by total assets.

*Current ratio* ( $Curr$ ): current assets divided by current liabilities.

*Free cash flows* ( $FCF$ ): cash flow from operations less capital expenditure divided by current assets.

*CF Vol*: the logarithm of the standard deviation of the firm's net operating cash flow over the prior three years.

*Rev Vol*: the logarithm of the firm's total revenue standard deviation over the prior three years.

*Financial loss* ( $Loss$ ): dummy variable set equal to 1 if the firm had negative earnings in the preceding year and 0 otherwise.

*Auditor size* ( $AudBig$ ): dummy variable set equal to 1 if the auditor is a Big audit firm (audit

organization), and 0 otherwise.

*Auditor industry expertise (AudExp)*: dummy variable set equal to 1, the auditor is an expert in the industry, and 0 is otherwise. The total ratio of assets of all owners of an audit firm in an industry calculates industry specialization.

*Audit firm ranking (AudRank)*: equal to the ranking of the audit firm provided by the Securities and Exchange Organization (SEO).

*Auditor gender (AudGen)*: dummy variable set equal to 1 if one (or both) audit partners are women and 0 otherwise.

*Audit tenure (AudTenure)*: the number of years that the client firm retains the auditor.

*Ownership concentration (ConOwner)*: the percentage of a firm's outstanding shares that are owned by the largest shareholder ( $\geq 5\%$ ).

*Institutional investors (InstOwner)*: the percentage of shares institutional investors hold.

*Management tenure (MTenure)*: the number of years working as a CEO in the firm

*Board independence (BInd)*: the percentage of independent directors on the board.

*Board size (BSize)*: the number of board members.

This study also includes industry and year fixed effects and cluster standard errors by firms to control for cross-sectional correlation (Gow et al., 2010).

## 4. Empirical results

### 4.1 Descriptive statistic

Table 1 presents descriptive statistics for the full sample. On average, the financial restatement (*Restate*) and modified audit opinion (*AudOpinion*) are 42.6% and 44.9%, respectively. The average *DIN* is 1.314, and the average stock return ( $Ret^*-1$ ) is -0.862. In terms of other risk factors, i.e., daily stock return volatility (*Vol*), financial crisis (*Z-Score*), and leverage (*Lev*), the averages are 0.032, -1.877, and 0.606, respectively. In addition, the average of firm size (*LnTA*), firm profitability (*Profit*), current ratio (*Curr*), free cash flows (*FCF*), and financial loss (*Loss*) are 14.847, 0.136, 1.664, 0.040, 0.101, respectively. Furthermore, the mean values for the logarithm of the standard deviation of the firm's net operating cash flow (*CF Vol*) and the logarithm of the standard deviation of the firm's total revenue (*Rev Vol*) are 5.096 and 5.514, respectively. The average of firms audited by a big audit firm (audit organization) is 16.2%. On average, 63.3% of the auditors have industry expertise (*AudExp*), and the rank of audit firms (*AudRank*) varies from 1 to 5, with a mean value of 3.970. Notably, rank 5 is considered for the audit organization. The mean values for the gender of the audit partners (*AudGen*) and audit firm tenure (*AudTenure*) are 0.115 and 3.947, respectively. Furthermore, the average ownership concentration (*ConOwner*), institutional investors (*InstOwner*), and management tenure (*MTenure*) are 0.686, 0.547, and 3.751, respectively. Finally, the average board size (*BSize*) is 5.041, of whom 66.4% are independent directors (*BInd*).

### 4.2 Correlation matrix

Table 2 shows the Spearman correlation matrix of dependent, independent, and control variables. The findings show that the correlation of *DIN* with financial restatement (*Restate*) and modified audit opinion (*AudOpinion*) are positive and significant at a 5% level, indicating that *DIN* may be associated with higher financial restatement and the possibility of issuing a modified audit opinion. The coefficients of independent and control variables are below 0.67, and variance inflation factor (VIF) scores for all variables were below 10, showing a lower multicollinearity.

**Table 1.** Descriptive statistics

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>STD</b>	<b>Max</b>	<b>Min</b>
<i>Restate</i>	1,358	0.426	0.000	0.495	1.000	0.000
<i>AudOpinion</i>	1,552	0.449	0.000	0.498	1.000	0.000
<i>DIN</i>	1,552	1.314	1.000	1.039	4.000	0.000
<i>Ret</i>	1,552	-0.862	-0.234	1.821	0.685	-9.356
<i>Vol</i>	1,552	0.032	0.029	0.013	0.079	0.009
<i>Z-Score</i>	1,552	-1.877	-1.562	1.880	2.210	-6.810
<i>Lev</i>	1,552	0.606	0.600	0.228	1.215	0.132
<i>LnTA</i>	1,552	14.847	14.604	1.626	19.774	11.639
<i>Profit</i>	1,552	0.136	0.110	0.150	0.560	-0.238
<i>Curr</i>	1,552	1.664	1.383	1.060	6.858	0.373
<i>FCF</i>	1,552	0.040	0.078	0.392	0.799	-2.086
<i>CF Vol</i>	1,552	5.096	5.022	0.740	7.247	3.593
<i>Rev Vol</i>	1,552	5.514	5.440	0.782	7.906	3.884
<i>Loss</i>	1,552	0.101	0.000	0.302	1.000	0.000
<i>AudBig</i>	1,552	0.162	0.000	0.368	1.000	0.000
<i>AudExp</i>	1,552	0.633	1.000	0.482	1.000	0.000
<i>AudRank</i>	1,552	3.970	4.000	0.716	5.000	1.000
<i>AudGen</i>	1,552	0.115	0.000	0.319	1.000	0.000
<i>AudTenure</i>	1,552	3.947	3.000	4.245	19.000	1.000
<i>ConOwner</i>	1,552	0.686	0.739	0.207	0.975	0.105
<i>InstOwner</i>	1,552	0.547	0.647	0.326	0.970	0.000
<i>MTenure</i>	1,552	3.751	2.000	3.642	17.000	1.000
<i>BInd</i>	1,552	0.664	0.600	0.189	1.000	0.200
<i>BSize</i>	1,552	5.041	5.000	0.284	7.000	5.000

### 4.3 Regression results

#### 4.3.1 Test of H1

Table 3 presents the results from a Logit estimation of model 1. The results reveal that DIN impacts the likelihood of restating the financial statements. In particular, the coefficient of DIN is statistically significant and positive (coef. = 0.2886 with a p-value of < 0.01). The result is not only statistically significant, but it is also economically significant, which shows that DIN will increase the incidence of financial restatements and thus the research's first hypothesis is supported. This result is consistent with the current study's arguments that DIN is associated with a more agency cost, as Alessandri and Khan (2006) document a positive association between DIN and firm performance. DIN also incentivises managers to engage in opportunistic actions such as earnings manipulation to demonstrate favourable performance, which may indicate subsequent financial restatements. This is in line with institutional and behavioral theories, which suggest that DIN can have detrimental effects on firm performance and lead to risky choices.



Table 2. Spearman correlation matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Restate	1.000														
2 AudOpinion	0.252*	1.000													
3 DIN	0.184*	0.088*	1.000												
4 Ret	0.393*	0.083*	0.091*	1.000											
5 Vol	-0.278*	-0.029	0.000	-0.437*	1.000										
6 Z-Score	0.235*	0.235*	0.056*	0.326*	-0.081*	1.000									
7 Lev	0.007	0.086*	-0.026	0.084*	0.007	0.527*	1.000								
8 LnTA	-0.218*	-0.035	-0.104*	-0.144*	0.068*	-0.178*	0.125*	1.000							
9 Profit	-0.245*	-0.258*	-0.087*	-0.327*	0.084*	-0.545*	-0.516*	0.202*	1.000						
10 Curr	-0.092*	-0.118*	0.022	-0.233*	0.133*	-0.677*	-0.607*	-0.101*	0.600*	1.000					
11 FCF	-0.029	-0.166*	-0.013	-0.012	-0.165*	-0.324*	-0.237*	0.064*	0.344*	0.094*	1.000				
12 CF Vol	-0.143*	-0.046	-0.041	-0.065*	-0.017	-0.166*	0.079*	0.629*	0.192*	-0.109*	0.149*	1.000			
13 Rev Vol	-0.140*	-0.056*	-0.128*	-0.105*	0.054*	-0.135*	0.149*	0.610*	0.200*	-0.109*	0.103*	0.536*	1.000		
14 Loss	0.088*	0.135*	0.134*	0.076*	0.035	0.491*	0.248*	-0.121*	-0.541*	-0.305*	-0.159*	-0.085*	-0.099*	1.000	
15 AudBig	-0.045	0.071*	-0.047	0.078*	-0.067*	0.047	0.160*	0.261*	-0.061*	-0.148*	-0.010	0.2520*	0.2121*	0.020	1.000
16 AudExp	-0.058*	0.001	0.032	0.043	-0.063*	-0.070*	0.105*	0.388*	0.061*	-0.198*	0.112*	0.362*	0.253*	-0.037	0.314*
17 AudRank	-0.054*	0.051	-0.062*	0.027	-0.037	0.013	0.103*	0.284*	-0.022	-0.109*	0.025	0.275*	0.242*	0.032	0.500*
18 AudGen	-0.039	0.132*	0.023	-0.051	0.085*	-0.117*	-0.090*	0.077*	0.100*	0.125*	-0.014	0.058*	0.049	-0.016	0.130*
19 AudTenure	-0.043	-0.004	-0.014	0.021	0.019	0.003	0.078*	0.179*	-0.014	-0.069*	-0.003	0.185*	0.157*	-0.013	0.599*
20 ConOwner	0.059*	-0.185*	0.007	0.123*	-0.204*	-0.032	0.140*	0.177*	0.058*	-0.145*	0.187*	0.212*	0.149*	-0.072*	0.099*
21 InstOwner	0.024	-0.224*	-0.071*	0.130*	-0.150*	0.012	0.197*	0.278*	0.029	-0.241*	0.185*	0.269*	0.242*	-0.04	0.164*
22 MTenure	-0.013	-0.011	0.030	-0.001	-0.005	-0.108*	-0.170*	-0.078*	0.117*	0.162*	0.027	-0.079*	-0.059*	-0.125*	-0.115*
23 BInd	0.086*	-0.006	0.034	0.068*	-0.046	-0.080*	-0.222*	-0.166*	0.088*	0.106*	0.049	-0.147*	-0.174*	-0.071*	-0.190*
24 BSize	0.038	0.036	0.075*	0.017	-0.026	0.014	-0.086*	-0.034	0.088*	0.106*	0.020	-0.029	-0.007	0.030	-0.052
16 AudExp	1.000	17	18	19	20	21	22	23	24						
17 AudRank	0.305*	1.000													
18 AudGen	0.115*	0.127*	1.000												
19 AudTenure	0.211*	0.499*	0.061*	1.000											
20 ConOwner	0.124*	0.077*	-0.085*	0.062*	1.000										
21 InstOwner	0.207*	0.171*	-0.048	0.114*	0.622*	1.000									
22 MTenure	-0.035	-0.130*	0.038	-0.031	0.020	-0.108*	1.000								
23 BInd	-0.047	-0.161*	-0.053	-0.140*	-0.095*	-0.140*	0.053	1.000							
24 BSize	0.017	-0.047	-0.021	-0.055*	-0.172*	-0.153*	-0.017	0.167*	1.000						

\* denotes statistical significance at the 5 % level.

**Table 3.** Regression results for H1

DV =	Restate			
	Coef.	std	z	P(value)
Constant	0.727	2.808	0.260	0.796
DIN	0.288	0.079	3.640***	0.000
Ret	-0.048	0.092	-0.530	0.598
Vol	-9.330	6.856	-1.360	0.174
Z-Score	-0.066	0.225	-0.300	0.768
Lev	-1.156	0.597	-1.940**	0.053
LnTA	0.127	0.169	0.750	0.453
Profit	-2.225	2.743	-0.810	0.417
Curr	-0.167	0.136	-1.230	0.219
FCF	-0.020	0.233	-0.090	0.930
CF Vol	-0.376	0.269	-1.400	0.162
Rev Vol	0.064	0.246	0.260	0.794
Loss	-0.047	0.314	-0.150	0.881
AudBig	-1.136	0.496	-2.290**	0.022
AudExp	0.043	0.264	0.170	0.869
AudRank	0.133	0.163	0.810	0.416
AudGen	-0.099	0.273	-0.360	0.716
AudTenure	0.019	0.039	0.490	0.624
ConOwner	0.216	0.611	0.350	0.724
InstOwner	-0.218	0.387	-0.560	0.573
MTenure	-0.056	0.027	-2.090**	0.036
BInd	0.530	0.510	1.040	0.299
BSize	0.118	0.458	0.260	0.795
Year Effects			Include	
Industry Effects			Include	
Cluster (firm)			Include	
Pseudo R2			0.347	
Wald chi2			361.05***	
N			1,358	

\*, \*\*, \*\*\* indicate significance at 0.10, 0.05, and 0.01 level, respectively.

### 4.3.2 Test of H2

Consistent with H2, firms with higher DIN are more likely to receive a modified audit opinion. In this regard, Table 4 reports the results of the Logit regression analysis on the relationship between DIN and modified audit opinion. The results show a significant and positive coefficient for DIN at a 10% level (coef. = 0.1210 with a p-value of < 0.10), suggesting that firms with higher DIN are positively associated with issuing a modified opinion by the auditor. This result is consistent with research arguments. Firstly, deviating from industry norms may decrease a firm's survival and profitability (Alessandri and Khan, 2006), leading to increased information risk. Secondly, DIN may lead to opportunistic managerial behaviors and misstatements of financial reports, which can increase the client's business risk and lead to a modified audit opinion.

## 4.4. Sensitivity analyses

### 4.4.1 Firm fixed-effect regression

In this section, we control for unobserved time-invariant firm heterogeneity by re-running main regression models using firm fixed effects. In this approach, the number of observations decreases because the fixed-effects logit regression omits the firms whose dependent variable information in all years has been either 1 or 0. The results of Table 5 show that the coefficients on DIN in both restatement and audit opinion are positive and significant, indicating that firm-level unobserved heterogeneity does not influence the main results. This also suggests that the results are driven by

DIN apart from the firm characteristics.

**Table 4.** Regression results for H2

DV =	AudOpinion			
	Coef.	std	z	P(value)
Constant	1.729	2.648	0.650	0.514
DIN	0.121	0.070	1.710*	0.086
Ret	0.055	0.044	1.230	0.218
Vol	-8.815	5.358	-1.650*	0.100
Z-Score	0.053	0.230	0.230	0.816
Lev	0.556	0.566	0.980	0.325
LnTA	0.368	0.153	2.400**	0.016
Profit	-2.125	2.692	-0.790	0.430
Curr	-0.107	0.155	-0.690	0.490
FCF	-0.217	0.183	-1.190	0.235
CF Vol	-0.004	0.204	-0.020	0.981
Rev Vol	-0.428	0.239	-1.790*	0.073
Loss	0.074	0.257	0.290	0.773
AudBig	0.858	0.606	1.410	0.157
AudExp	0.011	0.297	0.040	0.970
AudRank	0.091	0.123	0.740	0.461
AudGen	0.602	0.259	2.320**	0.020
AudTenure	-0.077	0.045	-1.690*	0.091
ConOwner	-1.698	0.678	-2.500**	0.012
InstOwner	-1.629	0.492	-3.310***	0.001
MTenure	0.009	0.029	0.330	0.741
BInd	-0.282	0.484	-0.580	0.560
BSize	-0.336	0.393	-0.860	0.392
Year Effects			Include	
Industry Effects			Include	
Cluster (firm)			Include	
Pseudo R2			0.206	
Wald chi2			234.15***	
N			1,552	

\*, \*\*, \*\*\* indicate significance at 0.10, 0.05, and 0.01 level, respectively.

#### 4.4.2 Alternative DIN score

This section estimates regression models using observations with a high DIN score. To do this, we create a binary variable (DIN\_DUMMY) equal to 1 if the DIN is higher than the median of the observations and zero otherwise. Panel A of Table 6 shows that the coefficients on DIN\_DUMMY are positive and significant for both restatement and audit opinion.

#### 4.4.3 Matched sample

As the restatements and audit opinions may be based on other firm-level characteristics rather than deviating from industry norms, we create a matched sample in which the characteristics of high-DIN firms are similar to those of other firms. We use a propensity score matching (PSM) method, following Bjornsen et al. (2020). First, we create a binary variable (DIN\_DUMMY) as mentioned in section 5.2. Then, we regress the binary variable DIN\_DUMMY on firm-level financial variables. Following Hope et al. (2013) and Bjornsen et al. (2020), we apply one-to-one matching without replacement and need the propensity score to be within 0.049. Using the matched sample, Panel B of Table 6 shows that the coefficients of DIN are positive and significant. This supports our main findings for H1 and H2.

**Table 5.** Regression results by controlling firm-level fixed effects

DV =	Restate		AudOpinion	
	Coef.	P(value)	Coef.	P(value)
DIN	0.391***	0.000	0.044*	0.065
Ret	-0.074	0.487	0.071	0.302
Vol	-12.618	0.161	-2.639	0.759
Z-Score	0.226	0.548	-0.158	0.618
Lev	-2.900***	0.004	-0.311	0.729
LnTA	0.019	0.969	-0.757*	0.076
Profit	-2.813	0.526	-3.673	0.278
Curr	0.076	0.710	-0.118	0.634
FCF	-0.220	0.509	-0.452*	0.071
CF Vol	-0.616	0.113	-0.251	0.411
Rev Vol	0.099	0.794	0.194	0.567
Loss	-0.227	0.583	-0.144	0.674
AudBig	-0.417	0.648	0.856	0.385
AudExp	-0.526	0.379	0.005	0.989
AudRank	0.191	0.422	0.135	0.420
AudGen	-0.048	0.914	0.969**	0.020
AudTenure	0.024	0.752	-0.063	0.395
ConOwner	1.782	0.353	-1.060	0.310
InstOwner	0.849	0.642	-0.597	0.695
MTenure	-0.061	0.117	-0.047	0.294
BInd	0.305	0.705	-1.258	0.125
BSize	6.718***	0.000	-0.389	0.492
Year Effects		Include		Include
Industry Effects		NO		NO
Cluster (firm)		Include		Include
Pseudo R2		0.552		0.166
Wald chi2		837.32***		82.55***
N		1,253		952

\*, \*\*, \*\*\* indicate significance at 0.10, 0.05, and 0.01 level, respectively.

**Table 6.** Regression results of DIN alternative score and matched sample

**Panel A: Alternative DIN score**

DV =	Restate		AudOpinion	
	Coef.	P(value)	Coef.	P(value)
<b>DIN-DUMMY</b>	<b>0.613***</b>	<b>0.000</b>	<b>0.263*</b>	<b>0.079</b>
Control variables		Include		Include
Constant		Include		Include
Year Effects		Include		Include
Industry Effects		Include		Include
Cluster (firm)		Include		Include
Pseudo R2		0.347		0.207
Wald chi2		378.730***		243.250***
N		1,358		1,552

**Panel B: Matched sample**

DV =	Restate		AudOpinion	
	Coef.	P(value)	Coef.	P(value)
<b>DIN</b>	<b>0.626***</b>	<b>0.000</b>	<b>0.352*</b>	<b>0.074</b>
Control variables		Include		Include
Constant		Include		Include
Year Effects		Include		Include
Industry Effects		Include		Include
Cluster (firm)		Include		Include
Pseudo R2		0.364		0.257
Wald chi2		269.450***		198.640
N		1,024		1,194

\*, \*\*, \*\*\* indicate significance at 0.10, 0.05, and 0.01 level, respectively.

## 5. Conclusion

Financial reporting is essential to any business, providing stakeholders with a snapshot of a company's financial health. However, when companies deviate from industry norms, it can significantly impact the accuracy and reliability of financial reporting and the audit opinions provided by external auditors. Hence, this study aims to investigate the impact of DIN on the incidence of financial restatements and audit opinion. This study uses Logit regression models and a sample of 194 listed firms on the Tehran Stock Exchange from 2014 to 2021 to test research hypotheses. The results show that the DIN increases the likelihood of financial restatements. Additionally, the results revealed that DIN can increase the probability of receiving a modified opinion.

In conclusion, a company deviating from industry norms on financial reporting and audit opinions can be significant and far-reaching, leading to financial misstatements, a loss of public trust, and negative implications for competition and financial stability. Thus, this study has several important implications. First, managers must adhere to industry norms and be transparent and honest in their financial reporting to avoid DIN's negative consequences. At the same time, external auditors must be vigilant in their audit procedures. Second, investors and other stakeholders must also be aware of the potential consequences of DIN and take them into account when making investment decisions.

This study also makes important contributions to the current literature. While much of the research has examined the internal and external factors that influence financial statement restatement and external auditor's opinion, research on the effect of DIN is scarce. This paper extends this stream of research by offering the first empirical study on the implications of DIN for the firm's financial restatements and auditors' opinions, highlighting the dark side of DIN. Prior research (e.g., Geletkanycz and Hambrick, 1997; Alessandri and Khan, 2006) has found support for the negative effects of DIN. By expanding this discussion to financial restatement and audit opinion, this study provides further evidence of the disadvantages of DIN for firms.

This study measured DIN using the industry median and four risk factors. Norms may exist at the strategic group level rather than the industry level. Yet, measuring strategic group norms would be difficult given the difficulty of identifying strategic groups. Future research may explore the norms by identifying strategic groups of managers, experts, and investors. Lastly, future research could examine the effect of DIN on stock price crash risk, management turnover, and information transparency.

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