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The effect of revaluation on innovation strategy of company (Evidence from stock exchange of Tehran province)

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ABSTRACT
The goal of this study is to investigate the effect of accounting revaluation on the company's innovation strategy. The research method is applied and post-event. The statistical population of the study includes companies that re-evaluate and companies that do not re-evaluate. The time period of the survey is between 2011 and 2018. Data were analyzed using descriptive statistics, regression and Eviews 12 software. Results indicated that the companies that re-evaluate their financial statements experience a greater increase in exploratory innovation and a further decrease in exploitative innovation compared to the companies that do not re-evaluate. Therefore, revaluations are associated with increased risk-taking because managers believe that improving financial statements will improve the performance of the organization, and the results between fraudulent and non-fraudulent revaluations, and among revaluations are also different from each other.
Keywords: Accounting Revaluations, Innovation Strategy, Exploration, Exploitation.

Introduction

Restatement of financial statements, which has become one of the characteristic of financial reporting in Iran, can have several negative consequences for investors and other stakeholders. That means restating last year's financial information in order to correct misinformation or increase comparability. Based on the reports, the restatement of financial statements in Iran is 0.80, which is 0.07 in the United States. The significance of restatement of financial statements justifies the effort to better understand this phenomenon. Findings of some studies show that the prevalence of restating financial statement can influence on organizational strategies (Atic, 2009). In this regard, Chakravarti et al. (2014) declare that revaluations may cause stimulation of changes in the strategic direction and priorities of the company. The management literature identifies two general types of innovation: exploratory innovation and exploitative innovation (Bennr & Toushan, 2012; McGreat, 1993; Lountal & March, 1993). Explorations involve moving from existing knowledge and experimenting with new technologies and approaches. Although this type of innovation is associated with higher financial returns and credit outcomes (Salomo et al., 2008; Schmit & Kanaton, 1998), and it is also characterized by higher risk-taking and higher failure rates (March, 1991).Contrarily, extraction is also related with "refining and expanding existing technologies and paradigms." This innovation is associated with less risk-taking, and it is shown that returns are more approximate and predictable (Hey and Wang, 2004).

Another reason for re-statement is due to the auditor because the financial statements audited by independent auditors are a very dependable means of transmitting reliable information. The auditor

validates claims presented by another person in the form of financial statements, thereby increases the reliability of the information used in economic decisions (Nikkhah Azad, 2000).

As revaluations are often considered as financial reporting failures (Asbaglff aseff et al., 2007 and Amol Zadeh and Zhang, 2015), it is acceptable that companies will focus more on exploitative innovation after revaluations. On the other hand, as Lountal and March (1993) have mentioned, managers who have experienced failure in the past may increase risk-taking because managers believe that positive and raising potential can lead to the improvement of the company (financially and / or non-financially) (Palmer and Wisman, 1999). Therefore, it is acceptable that companies conducting revaluation are more focused on exploratory innovation. According to the above, in the current study, the effect of accounting revaluations on the company's innovation strategy has been examined. We have examined a sample of companies which are members of the Tehran Stock Exchange during the period of 2011-2018, that do revaluation and the ones that do not revaluate and have been adapted through the propensity score method. In the first part, the research literature and development of hypotheses have been presented, in the third part, the methodologyhas been explained, in the fourth part, the findings have been presented and in the fifth part, conclusions are made.

Research Literature and Hypothesis Development

- **Accounting revaluation**

Restating financial statements is at the core of the debate over the quality of financial reporting (Akhgar and Jani,2015). The US Securities and Exchange Commission considers the restatement of financial statements as "the most objective measure of the inaccuracy of the presentation of the original financial statements before restatement." Restatement of financial statements indicates a failure of the quality of financial reporting, which raises concerns about the reliability of the financial reporting environment (Etemadi et al., 2018). The restatement of financial statements, which is the subject of many emerging studies, has provided an appropriate objective approach to check the degree of innovation (Riei and Safarzadeh, 2014); because one of the primary and underlying reasons for the re-presentation of financial statements is the inability of the auditor to detect misstatements with the significance of the financial statements before their publication (Abdoli and Ghayyumi, 2013). The conducted research studies have cited the correction of errors as the most common reason for restating of financial statements (Piri and Sheikh Mohammadi, 2013). Restating financial statements means items of financial statements of the last year or previous years to be resubmitted due to changes in the balance of items or due to changes in categorization. The restatement depends on the comparative figures that we put in the financial statements (Tikbaht and Rafiei, 2012). That is, if the financial statement is of two years, the financial statement of the previous year is presented, but if there are figures of 3 years in the financial statement, the financial statement of the previous 2 years should be restated (Lee, 2019). The figures for the annual financial statements prepared by companies are generally of two years. The figures for interim financial statements generally include items for the current financial year, the previous financial interval, and the previous financial year. In previous research studies, the most important reasons for restating financial statements are the weakness of the company's internal control system, the lack or inefficiency of the company's audit committee, lower profitability, slower growth, higher leverage and lower cash inflows (Layer, 2019).Though, some have also considered the factor of the company's credit and reputation. In these studies, it has been found that reputable and respectable companies have had less re-statements than other competitors (Jakob, 2018). Of course, the effect of company size on the rate of restatement of financial statements has also been confirmed, and usually small companies with lower market value have more restatements (Sand, 2018). Previous studies indicate that experience and expertise of managers and financial staff, scattered and decentralized ownership, conservative management tendencies and approaches, capital market pressure that lead managers to non-compliance with accounting standards, managers 'insistence on meeting industry standards and yardsticks and financial analysts' estimates of profits or sales can increase the probability of restating the financial statements (Murat, 2018). Of course, the extension of the use of management reward scheme based on stock prices and as a result of manipulation of financial figures and

profits management by managers to achieve higher rewards has also been known to affect on the growth of the rate of restating company's financial statements (Fung, 2018).

- **Innovation strategy**

Innovation strategy is a new model for organizations that guides them in adapting, integrating and reconfiguring innovative capabilities and management competencies, as well as efficiently assigning their resources to cope with the changing environment and provide the foundation for maintaining and improving their performance (Sun, 2018). The management literature identifies two distinct innovation strategies: exploratory innovation and exploitative innovation (Lountal and March, 1993; McGreat, 2001). Exploration is described by testing, taking risks, and creating entirely new products, services, or business models, which satisfy the needs of new customers or create new demands. Although exploration is associated with higher rates of failure, previous research studies have indicated that successful explorations are also associated with higher returns. The results of exploratory innovation strategies include superior and novel products and / or service giving to suggestions, which lead in sale generation in new or emerging markets (Brener and Toshman, 2003). Because such innovations are hard for competitors to imitate, the benefits of the first bidder may last for a long time, which increases the duration of the monopoly benefits and high financial returns (Schmit & Kanaton, 1998). In addition to outcomes and financial returns, explorations have significant and positive effects on the company's image, reputation and brands (Salomo et al., 2008).Contarily, the exploitative innovation strategy mostly increases improvements and reformations of existing skills and processes (Holmosti, 2004; Lountal & March, 1993) and leads to incremental product changes (Amsoun, 2006). Such innovation results are relatively familiar to the innovative company and its customers; then, they involve less risk. Although the returns from exploitative innovation are more predictable, they are only associated with normal profits (Birley and Dolly, 2007), and contribute less to the company's reputation (Salomo et al., 2008).

- **Hypothesis Development**

Companies from different industries face different risks and opportunities. Additionally, the economic and operational conditions of each industry are different from other industries. Competitive conditions, diversity of markets and customers, access to financing sources and other differences, cause actors in each industry to have specific and different incentives for probable manipulation of the information related to accounting and profit management (Andez, 2018). These differences are so significant that in many studies, when reviewing the restatement of financial statements, innovation strategy has been considered as an affected factor in the analysis. In the United States, Terner and Wireah (2006) examined the restatement of the financial statements of 25,000 views of companies that are members of the Securities and Exchange Commission. The findings of their examination show that 25% of the restatements were due to the identification of risk-taking managers who have a high tendency to innovate. Zigenfass et al. (2006), in their intra-industry research, concluded that restatement by a company would have a contagious and transmittable effect on the innovation tendency of that industry. But as mentioned, innovation has two dimensions of exploration and extraction, and before that, it is not clear that whether the new restatements of accounting presentations are associated with increasing the company's focus on exploratory innovation or by increasing the company's focus on exploitative innovation. Restatements are often referred to as financial reporting failures. As revaluation companies face increased capital costs, they may need to pursue more risky projects to meet the requirement for higher returns. So, it is acceptable for revaluation companies to be associated with increased risk-taking, and to focus more on exploratory innovation. In addition to fluctuations in the manager's risk tolerance level that may influence on the direction of company innovation, revaluations can be accompanied by other changes in the company, which affect on the innovation strategy. Revaluation companies progress their governance and internal control systems as a corrective measure, to reduce the probability of future revaluations, as well as to exhibit the company's commitment in preventing mismanagement (Gelesip & Didnez, 2009, Geristin et al., 2006).

An examination of the financial statements of companies listed on the Tehran Stock Exchange shows that most companies restate their financial statements. From the investors' point of view, the news of

restating financial statements not only mirrors the performance problems of the past period, but also is a kind of predicting future problems for the company and its management and causes investors to lose their trust in the credibility and competence of management and decrease the quality of reported profits (Akhgar and Alikhani, 2014).

Strict control is expected to have an unfavorable effect on exploratory innovation, as exploratory activities involve an organizational structure, characterized by less formalization, low concentration, and high independence (Pandy and Sharma, 2009). Revaluation companies also face credit-related losses, therefore, they may rise their focus on exploratory innovation as a credit recovery strategy (Kaproff et al., 2008; Chararoti et al., 2014). Based on what discussed, the net effect of accounting revaluations on the innovation strategy of the research hypothesis company is:

Companies do not experience fluctuations in their innovation strategies after accounting revaluations.

Methodology

The current research, according to its goals, is a type of applied research and in terms of the research process, it is of field and post-event. The statistical population of the study was the member companies of Tehran Stock Exchange between 2011 and 2018, that 229 companies were selected as the sample size by screening method. It should be noted that data collection was based on the collection of all information about the research population; unless the necessary information to test the hypotheses is not available. Next, we make the control group of companies that adapt to the revaluation companies in all the important features which are observable before these events, but do not experience the restatement. A set of potential controlling companies includes all the companies in Compustat that have not performed an accounting revaluation in the years 2011-2018. Our matching method relies on matching to the nearest vicinity of inclination scores, which has originally been developed by Rozbin and Robin (1983). First, we perform a probit regression of a fictitious variable, if the company-year-specific observation belongs to our Tadbir group in a full list of the company's observable characteristics and also, the fictitious variables of the SIC industry are of two digits and a year, it is considered one (otherwise, it is zero). The trend-matching method ensures that our control group is very similar in the probability that it is a revaluation company, unless these firms do not do any revaluations. Descriptive statistics, regression and Eviews 12 software were used to analyze the data.

- **Measuring variables**

Innovation strategy

The criterion of the amount of our explorations is calculated as the number of exploration patents files (and ultimately obtained) in a given year divided by the total number of patents filed by the company in the same year. Similarly, our extraction or exploitation metrics are calculated by dividing the total number of patents registered by the company in a given year by the number of files related to the extracted (and ultimately acquired) inventions in the same year. These criteria are usually the criteria used in innovation strategy. These two criteria are two opposing structures that indicate the two ends of a chain.

Following the management literature, we grant patents that are unrelated to the company's existing knowledge and serve as experiments in new fields, such as "exploratory patents", and inventions that grow the strength and expertise of a company in the current field, we define them as "exploitative inventions". Operationally, we use the resources of Condodio et al. (2019) and Jia and Tisn (2018) to classify a patent, which, if at least 60% of its citations are based on new knowledge, it is classified as exploratory. We define the existing knowledge of the company as a set of its previous patents and a set of patents that have been cited over the past 5 years due to their own patents. A higher value of Explore shows a greater intensity of exploratory innovation. Contrarily, if at least 60% of its citations are based on current knowledge, the invention is classified as exploitative or exploitable. More Exploit indicates greater intensity of exploitative innovation.

Table 1: Descriptive findings of variables

Panel A: Statistics Summary - Period Pre-Reassessment												
	Companies that do revaluate						Companies that do not revaluate					Difference
	Number of observations	Mean (1)	Std. deviation	P25	median	P75	Mean (2)	Std. deviation	P25	Median	P75	t-test t (1) - (2)
Innovation performance												
R&D	1344	0.3972	0.10892	0.2834	0.20854	0.208344	0.29844	0.19754	0.109843	0.19843	0.209754	0.0014
TotalPat	1344	0.41982	0.02434	0.29871	0.29713	0.10834	0.10843	0.20854	0.29843	0.2098754	0.10834	-0.17534
Explore	1344	0.3098	0.02981	0.29843	0.208143	0.20813	0.29843	0.10854	0.29843	0.87343	0.208545	0.19843
Exploit	1344	0.2871	0.01824	0.10983	0.197543	0.10984	0.19844	0.20813	0.29743		0.20814	-0.10043
Company characteristics												
Sales	1344		0.435	0.657	0.422	0.366	0.657	0.732	0.657	0.645	0.669	0.764
ROA	1344		0.654	0.675	0.432	0.411	0.744	0.546	0.564	0.611	0.793	0.735
Leverage	1344		0.324	0.545	0.265	0.456	0.540	0.756	0.622	0.476	0.833	0.793
Capex	1344		0.657	0.654	0.546	0.325	0.565	0.875	0.546	0.744	0.816	0.744
PPE/Assets	1344		0.611	0.633	0.435	0.675	0.564	0.633	0.344	0.745	0.892	0.784

TobinQ	1344		0.543	0.455	0.465	0.764	0.433	0.382	0.694	0.366	0.865	0.755
InstOwn	1344		0.577	0.634	0.534	0.675	0.761	0.365	0.711	0.765	0.843	0.876
BusDiv	1344		0.765	0.564	0.656	0.834	0.543	0.435	0.544	0.634	0.669	0.765
KZ Index	1344		0.432	0.561	0.544	0.546	0.577	0.732	0.657	0.747	0.793	0.711
Earnings Volatility	1344		0.654	0.657	0.656	0.366	0.675	0.546	0.564	0.645	0.833	0.744
Company governance												
Board Size	1344	0.790	0.766	0.744	0.755	0.833	0.743	0.843	0.731	0.761	0.773	0.766
Independence	1344	0.773	0.743	0.833	0.743	0.787	0.781	0.867	0.769	0.784	0.790	0.843
BusyDirector	1344	0.865	0.766	0.732	0.811	0.711	0.764	0.846	0.754	0.734	0.770	0.791
Cps	1344	0.843	0.743	0.762	0.865	0.803	0.850	0.755	0.738	0.755	0.745	0.794
Log(CEOVega)	1344	0.712	0.766	0.769	0.762	0.765	0.865	0.789	0.731	0.762	0.783	0.744
The external environment												
AnalystCoverage	1344	0.854	0.854	0.744	0.66	0.87	1.01	0.81	0.54	0.43	0.67	1.23

ForecastError	1344	0.764	0.764	0.803	0.54	0.53	0.51	0.93	0.96	0.56	0.88	1.54
ForecastDispersion	1344	0.893	0.893	0.754	0.66	0.77	0.89	0.84	0.56	0.34	0.65	1.33
HHI	1344	0.711	0.711	0.633	0.56	1.54	0.63	0.57	0.84	0.45	0.93	1.24
Panel B: Summary of Statistics - Post-Evaluation Period												
	Companies that do revaluate					Companies that do not revaluate						Difference
	Number of observations	Mean (1)	Std. deviation	P25	median	P75	Mean (2)	Std. deviation	P25	Median	P75	t-test t (1) - (2)
Innovation performance												
R&D	1048	0.072	0.071	0.018	0.057	0.105	0.065	0.072	0.022	0.041	0.081	** 0.007
TotalPat	1048	2.936	1.850	1.475	2.882	4.234	2.937	1.661	1.835	2.833	3.912	-0.001
Explore	1048	0.678	0.324	0.500	0.729	1.000	0.609	0.306	0.526	0.800	1.000	*** 0.069
Exploit	1048	0.072	0.071	0.018	0.057	0.105	0.065	0.072	0.022	0.041	0.081	** 0.007
Company characteristics												
Sales	1048	7.041	0.715	5.896	6.874	8.029	7.402	1.546	6.304	7.187	8.285	*** -0.361

ROA	1048	0.099	0.192	0.071	0.117	0.159	0.103	0.114	0.089	0.142	0.190	-0.004
Leverage	1048	0.250	0.301	0.105	0.238	0.338	0.237	0.165	0.110	0.242	0.332	0.013
Capex	1048	0.052	0.048	0.023	0.039	0.063	0.058	0.050	0.027	0.041	0.062	*** -0.006
PPE/Assets	1048	0.253	0.169	0.107	0.202	0.331	0.260	0.167	0.135	0.234	0.340	-0.007
TobinQ	1048	2.364	3.025	1.244	1.645	2.442	2.449	4.499	1.326	1.754	2.538	-0.085
InstOwn	1048	0.606	0.316	0.494	0.694	0.833	0.585	0.284	0.469	0.678	0.792	* 0.021
BusDiv	1048	0.636	0.296	0.370	0.552	1.000	0.649	0.307	0.401	0.691	1.000	-0.013
KZ Index	1048	3.213	6.374	4.923	1.154	0.438	3.538	6.342	5.553	2.314	0.144	0.325
Earnings	1048	0.045	0.068	0.013	0.025	0.046	0.040	0.065	0.010	0.021	0.042	* 0.055
Company governance												
Board Size	1048	8.213	3.265	7.000	8.000	10.000	8.640	3.419	7.000	9.000	11.000	*** -0.427
Independence	1048	0.691	0.217	0.571	0.750	0.846	0.641	0.229	0.556	0.700	0.778	*** 0.050
BusyDirector	1048	0.146	0.209	0.000	0.000	0.250	0.121	0.178	0.000	0.000	0.200	*** 0.025

Cps	1048	0.380	0.130	0.295	0.379	0.454	0.377	0.118	0.296	0.379	0.447	0.003
Log(CEOVega)	1048	2.274	0.806	0.000	2.492	3.672	2.207	1.662	0.446	2.401	3.499	0.067
The external environment												
AnalystCoverage	1048	00.085	10.264	3.00	9.000	17.000	10.526	9.447	3.000	9.000	15.000	0.559
ForecastError	1048	0.012	0.026	0.001	0.003	0.010	0.009	0.023	0.001	0.002	0.006	*** 0.003
ForecastDispersion	1048	0.011	0.016	0.002	0.005	0.011	0.009	0.019	0.001	0.003	0.008	** 0.002
HHI	1048	0.222	0.182	0.091	0.155	0.297	0.223	0.143	0.123	0.198	0.295	-0.001

This table summarizes the statistics for revaluation companies and adapted non-revaluation companies in the pre-revaluation period (panel A) and the post-revaluation period (panel B). The number of observations is, respectively, for 3 years before revaluation, and 3 years after revaluation. Panel C reports the Pearson correlation matrix of the variables used in the baseline analysis (which includes both revaluation companies and adapted non-revaluation companies).

Table 2: Correlation matrix

Panel C: Correlation matrix																
	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Explore	1														
2	Exploit	0.898	1													

15	14	13	12	11	10	9	8	7	6	5	4	3
Log(CEOVega)	Cps	BusDiv	TotalPat	InstOwn	TobinQ	HHI2	HHI	PPE/Assets	Capex	Leverage	ROA	Sales
0.754	0.790	0.766	0.785	0.832	0.847	0.866	0.836	0.846	0.844	0.766	0.987	0.744
0.893	0.798	0.741	0.731	0.706	0.755	0.801	0.733	0.799	0.704	0.893	0.798	0.741
0.790	0.823	0.888	0.865	0.765	0.850	0.833	0.762	0.705	0.833	0.766	0.790	1
0.854	0.743	0.784	0.765	0.833	0.768	0.754	0.791	0.845	0.866	0.854	1	
0.754	0.834	0.865	0.856	0.733	0.875	0.833	0.783	0.867	0.854	1		
0.786	0.956	0.755	0.811	0.867	0.856	0.843	0.744	0.786	1			
0.5674	0.4993	0.3655	0.3983	0.6722	0.7222	0.6543	0.5674	1				
0.39244	0.34034	0.19854	0.29843	0.30987	0.20843	0.10843	1					
0.20814	0.18754	0.20815	0.19873	0.10895	0.29814	1						
0.308143	0.10854	0.20985	0.18545	0.20814	1							
0.20814	0.30814	0.20854	0.19834	1								
0.10854	0.20915	0.10854	1									
0.19854	0.10854	1										
0.1084	1											
1												

Table 4, Panel A, reports the results related to fraudulent companies and non-revaluation companies. In columns (1) and (2), where the dependent variable is the intensity and amount of exploration, the Fraud × Post coefficient is positive in both columns, but only in column (1) (ie using the OLS characteristic) it is significant. In columns (3) and (4), where the variable depends on the intensity and rate of extraction or exploitation, the Fraud × Post coefficient is negative in both columns, but it is only significant in column (3) (ie using the OLS characteristic). These results are weaker than the results presented in Panel A of Table 3, which suggests that there may be simultaneous changes in factors not related to special status that affect on the innovation orientations of fraudulent companies. After controlling these factors, we find only some evidence that fraudulent revaluation companies experience a greater increase (decrease) in exploratory innovation than non-revaluation supply companies.

Table 3: Accounting revaluation and innovation strategy: revaluation companies.

Panel A: Fraudulent reevaluations				
Dependent variable =	Explore		Exploit	
	OLS(1)	Tobit(2)	OLS(1)	Tobit(2)
Post	0.3874	0.3435	0.4985	0.20985
Sales	0.20844	0.3975	0.1854	0.19843
ROA	0.4092	0.4355	0.3854	0.29854
Leverage	0.3082	0.2864	0.20854	0.29843
Capex	0.20814	0.2985	0.3085	0.29854
PPE/Assets	0.20894	0.3854	0.20854	0.10854
HHI	0.4734	0.3085	0.2873	0.19843
HHI2	0.2984	0.2985	0.19854	0.19433
TobinQ	0.10845	0.3985	0.40934	0.20981
InstOwn	0.30844	0.3753	0.98344	0.28543
TotalPat	0.18754	0.3975	0.10854	0.9834
BusDiv	0.40834	0.3854	0.30825	0.19843
Cps	0.2974	0.2876	0.28544	0.20843
Log(CEOVega)	0.3854	0.29455	0.10854	0.29854
constant	12,434	0.39854	0.09843	0.29843
Constant effects of year and industry	Has been considered	Has been considered	Has been considered	Has been considered
R2/Pseudo R2	0.564	0.485	0.3865	0.39844
Observations	1344	1344	1344	1344
Panel B: Non-fraudulent reassessments				
Dependent variable =	Explore		Exploit	
	OLS	Tobit	OLS	Tobit
	(1)	(2)	(3)	(4)
Post	0.38954	0.3984	0.2984	0.39843
Sales	0.30985	0.39854	0.28445	0.39823
ROA	0.39854	0.39853	0.29843	0.39823
Leverage	0.20844	0.29854	0.28854	0.39854
Capex	0.19754	0.10894	0.98634	0.309854
PPE/Assets	0.39754	0.28545	0.98343	0.20854
HHI	0.55634	0.30824	0.10854	0.40934
HHI2	0.28754	0.29544	0.98243	0.39854
TobinQ	0.29744	0.39824	0.30824	0.40983
InstOwn	0.29844	0.10854	0.20543	0.30545
TotalPat	0.10985	0.49835	0.108953	0.397854

BusDiv	0.10854	0.39854	0.10854	0.39753
Cps	0.20954	0.76525	0.40843	0.39854
Log(CEOVega)	0.1093	0.32985	0.20843	0.39854
constant	0.28544	0.29843	0.208545	0.20984
Constant effects of year and industry	Has been considered	Has been considered	Has been considered	Has been considered
R2/Pseudo R2	0.49854	0.20854	0.29843	0.209843
Observations	1048	1048	1048	1048

This table reports the regression estimates of changes in the innovation strategy in accounting revaluations using revaluation companies. Panel A reviews 3 years before the revaluation and 3 years after the revaluation for fraudulent revaluations. Panel B reviews 3 years before the revaluation and 3 years after the revaluation for non-fraudulent revaluations. Table 4, Panel B, reports the results for non-fraudulent revaluation companies and adapted non-revaluation companies. In columns (1) and (2), where the variable depends on the intensity or amount of exploration, the coefficient at Non_Fraud × Post in both columns is significantly positive. In columns (3) and (4), where the variable depends on the intensity or rate of extraction and exploitation, the coefficient in Non_Fraud × Post is negative in both columns. These results are consistent with the findings in Panel B of Table 3, which indicate that in the post-revaluation period, non-fraudulent revaluation companies increased their risk taking compared to non-revaluation companies, and invest more (less) in exploratory innovation. In general, we find that the results are statistically less significant for fraudulent companies than for non-fraudulent companies. At the same time, however, the coefficients for fraudulent companies are uniformly larger, indicating that their results are on average more prominent than for non-fraudulent companies, but with greater variance in their behavior.

Table 4: Accounting Presentation and Innovation Strategy: Revaluation companies and adapted non-revaluation companies.

Panel A: Fraudulent reevaluations				
Dependent variable =	Explore		Exploit	
	OLS(1)	Tobit(2)	OLS(3)	Tobit(4)
Post	0.309854	0.28754	0.10854	0.298544
Fraud	0.398725	0.1843	0.20954	0.2089544
Post*Fraud	0.39854	0.29854	0.308925	0.298544
Sales	0.20854	0.1883	0.28544	0.198543
ROA	0.40834	0.20854	0.29854	0.209854
Leverage	0.209854	0.39825	0.10854	0.208854
Capex	0.308654	0.29854	0.205455	0.10954
PPE/Assets	0.30821	0.30854	0.10854	0.2098545
HHI	0.20445	0.29854	0.39854	0.1855
HHI2	0.29843	0.39854	0.98343	0.109544
TobinQ	0.20854	0.9823	0.10854	0.205455
InstOwn	0.28545	0.29843	0.19854	0.208544
TotalPat	0.208545	0.10854	0.29854	0.209545
BusDiv	0.208644	0.30925	0.30854	0.308545
Cps	0.20854	0.10446	0.20854	0.080385
Log(CEOVega)	0.10844	0.29845	0.18898	0.398454
Constant	14.3094	12,545	5.4765	3.98983
Constant effects of year and industry	Has been considered	Has been considered	Has been considered	Has been considered
R2/Pseudo R2	43/0	41/0	46/0	56/0

Observations	1344	1344	1344	1344
Panel B: Non-fraudulent reassessments				
Dependent variable =	Explore		Exploit	
	OLS (1)	Tobit(4)	OLS(3)	Tobit(4)
Post	0.30965	0.29743	0.30545	0.39854
Fraud	0.098935	0.29854	0.30854	0.08735
Post*Fraud	0.098340	0.9834	0.39854	0.09883
Sales	0.10944	0.20854	0.398544	0.309854
ROA	0.20954	0.39854	0.309854	0.209854
Leverage	0.983234	0.23866	0.29854	0.98614
Capex	0.089344	0.39854	0.98354	0.06735
PPE/Assets	0.29854	0.987343	0.20854	0.98753
HHI	0.08934	0.98634	0.39544	0.088354
HHI2	0.29843	0.9834	0.208954	0.8343
TobinQ	0.0913	0.39854	0.39774	0.98734
InstOwn	0.08924	0.18754	0.308545	0.108545
TotalPat	0.98344	0.29854	0.298543	0.298543
BusDiv	0.98244	0.208954	0.98982	0.398543
Cps	0.19855	0.98384	0.29843	0.309854
Log(CEOVega)	0.29854	0.2984	0.29854	0.29894
Constant	13.4985	14,885	0.39885	0.10894
Constant effects of year and industry	Has been considered	Has been considered	Has been considered	Has been considered
R2/Pseudo R2	0.545	0.634	0.3874	0.7651
Observations	1048	1048	1048	1048

This table reports regression estimates of changes in innovation strategy in accounting revaluations using revaluation companies and adapted non-revaluation firms through using PSM. Panel A examines 3 years before the revaluation and 3 years after the revaluation for fraudulent revaluations and non-revaluation companies. Panel B reviews 3 years before the revaluation and 3 years after the revaluation for non-fraudulent revaluations and adapted non-revaluation companies.

Discussion

In this paper, the result of an accounting revaluation for the company's innovation strategy was reviewed. Using a sample of revaluation companies and adapted non-revaluation supply companies by the willingness score covering the years2011-2018, we find out that after revaluations, revaluation companies experience a greater increase in exploratory innovation and a greater decrease in exploitative innovation than non-revaluation companies. The results are different for non-fraudulent revaluations and less strict revaluations. The results of this study provide new insights about the economic consequences of accounting revaluations. Particularly, we display that disclosure of misstatement has a real effect on the company's business strategy, which complements previous research on the economic implications of revaluations for company investments. We highlight the finding that revaluations not only affect on the level of investment, but also they impact on the strategic direction of these investments. Finally, our results complement previous research studies on the credit recovery strategies of revaluation companies, and display that transforming the company innovation orientation towards exploration seems to be a long-term strategy for restoring reputation and credibility. Finally, it can be pointed out that in every research in the process is faced with limitations, and in this research, due to the fact that the financial statements and reports of other companies are not publicly available, the study has been limited to companies listed on the Tehran Stock Exchange. Considering the type of examination that required the review of the complete set of financial statements (including explanatory notes attached); and it was possible to access this information after the fiscal period

of 2011, the study of this research has been limited to the financial statements of the 8-year period between 2011 to 2018, and based on the current standards, comparative financial statements cover only the reported year and the year before. Therefore, the researchers have not had access to information about reruns that originated more than a year ago. This limitation does not affect the test results, because by applying these amounts, the difference between the updated figures and the original figures becomes more severe, and consequently, the validity of the results is strengthened. For future research, it is also suggested to pay more attention to the time period or to use the auditor's fee variables in the model, the size of the auditing company, the number of auditing years by an auditor in the company.

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