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RESEARCH ARTICLE

Earnings Volatility and Corporate Risk-Taking with Moderating Role of R&D Disclosure: Evidence from Iraq Stock Market

Ahmed kadhim idan[1], Yahya Kamyabi[2*]

[1,2] Department of Accounting, Faculty of Economics and Administrative Sciences, University of Mazandaran, Babolsar, Iran

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***Corresponding Author:**

y.kamyabi@umz.ac.ir

ABSTRACT

The existence of earning volatility and the lack of transparency in the general direction of government economic policies in recent years have created an environment of uncertainty for economic activities in the country. The emergence of economic policy uncertainty makes it more difficult for companies to secure financing and may make it impossible for them to support high-risk, high-return investment projects due to budget constraints. Companies become more risk-averse in the face of economic policy uncertainty shocks. This relationship is valid under unstable risk criteria and earning volatility, regardless of whether macroeconomic conditions are favorable or not. Hence, we aim to identify moderating role of R&D expenditures on the relationship between earning volatility and corporate risk-taking in companies listed on the Iraq Stock Exchange.. In order to achieve the research objectives, 35 companies were selected as the available sample during the period from 2014 to 2022, and a total of 315 company-years were analyzed. The findings indicate a significant positive relationship between earning volatility and corporate risk-taking; However, no evidence was found to suggest the moderating role of R&D disclosure on the relationship between earning volatility and corporate risk-taking. In accordance with the findings, earning volatility leads to stronger risk-taking incentives; That is, when economic policy uncertainty increases, the company's investment motivation is primarily driven by opportunity expectations rather than risk aversion. The more economic policy uncertainty increases, the more companies are willing to take risks in order to adapt to the market, achieve desired performance, and take advantage of profit opportunities. With increasing economic policy uncertainty, companies are more likely to invest in R&D in order to improve product quality, price stability, and careful analysis of earning volatility conditions in order to maintain competition and capture a larger market share. Companies with high levels of financial assets, when R&D expenditures increase, strive more to reduce the risks associated with economic policy uncertainty through effective management of investments in sustainable assets and sustainable long-term profits.

INTRODUCTION

In Corporate risk-taking is the degree of uncertainty associated with forecasting a company's future cash flows and expected profits in relation to new investments (Chen and Ma, 2022). In relation to investment, investment risk encompasses the company-specific risks identified by Cheng and Masron (2023). Asset investment risk refers to the potential change in future returns from an asset. The

greater the volatility, the greater the risk of that asset (Fenget al. , 2023). Risk arises from the policies adopted by the country's macroeconomic factors, such as privatization, gross domestic product, inflation, etc., as well as the policies implemented at the company level, including financing methods, growth potential, liquidity policies, etc (Huang et al. , 2021). Economic policy uncertainty (EPU) refers to the inability to accurately predict how government economic policies will change based on economic factors. One of the most important operational environments for companies is the macroeconomic environment. Frequent changes in economic policies make the operating environment of companies complex, unstable, and difficult to predict. Ultimately, such changes can affect the risk-taking behavior of companies (Liang et al. , 2024). In other words, increased earnings volatility makes it difficult for companies to accurately anticipate future policy trends, which affects their risk-taking behavior. The level of corporate risk-taking reflects the risk preference of companies when making investments. The higher the level of corporate risk-taking, the more likely companies are to choose risky projects when investing. Making sound and risky decisions is important for companies. A higher level of risk-taking can help companies increase their research and development investment and increase their long-term competitive advantage (Ma et al. , 2023). Raithatha and Popli (2022) believe that macroeconomic indicators will affect corporate risk-taking. By identifying potential opportunities for uncertainty, companies avoid "bad" uncertainty and use "good" uncertainty to make profits and create value (Zhou et al. , 2022). Iraq as a developing country that experiences severe fluctuations in economic variables and earning volatility, the private sector is less willing to enter the economic arena. Important factors such as political structure, oil prices, and instability in economic policies play a significant role in creating economic policy uncertainty. Designing government policies with an unlimited time horizon and preferring short-term interests over long-term interests exacerbates this uncertainty. When earning volatility, which affects profitability and investment costs, leads to investment uncertainty, risk-averse companies reduce their investment levels and risk-taking companies reduce irreversible investments (Ahmed et al. , 2023).

The impact of economic policy uncertainty on corporate risk-taking is also influenced by product market competition and financial frictions (Zhou et al. , 2022). Risk-taking plays a crucial role in maintaining the competitive advantage of companies and driving them towards greater economic growth. Companies in competitive markets use various strategies to increase and maintain their position and create barriers to entry for competitors. Each strategy involves accepting a different level of risk that affects the company's idiosyncratic (non-systematic) risk in different ways (Busru et al. , 2022). One of the significant and influential factors affecting the competitive ability of companies is financial friction, which refers to financial constraints. Economic units need significant financial resources to create and develop continuously, which are often beyond their reach. Financial friction prevents companies from securing the necessary financing using external sources to make desirable investments and disrupts financial transactions, leading to increased investment costs and reduced economic growth (Clampit et al. , 2021). The findings of financial research show that companies become more risk-averse in the face of economic policy uncertainty shocks. For example, Wen et al. (2021) found that companies with financial constraints become more risk-averse in the face of economic policy uncertainty shocks (Zhou et al. , 2022). Vural-Yavaş (2020) also found similar results in a study, stating that this relationship is valid under unstable risk and earning volatility criteria, regardless of whether macroeconomic conditions are favorable or not (Zhou et al. , 2022).

In addition, research and development (R&D) in an industry is an important moderating factor in the effect of economic policy uncertainty on corporate risk-taking. Companies operating in concentrated industries reduce their risk-taking; Conversely, companies operating in highly investment in R&Ddo not change their risk-taking with an economic policy uncertainty shock, regardless of market conditions. However, financial constraints affect the risk aversion of firms. In fact, when the macroeconomic outlook is unfavorable, financially constrained firms. Earning volatility has a

significant impact on risk-taking of companies (Tran , 2020). This affects the risk-taking behavior of companies and exposes them to economic policy uncertainty. Therefore, research on the relationship between earning volatility and corporate risk-taking is very important in determining the implications for economic growth. By understanding how earning volatility affects the risk-taking behavior of companies, insights can be gained into how businesses make investment decisions. Policymakers can then design policies to create an economic environment that encourages businesses to take risks and invest, ultimately promoting economic growth. Apart from examining the relationship between earning volatility and corporate risk-taking, the marginal contribution of this study is primarily reflected through the following two aspects:

The role of research and development (R&D) expenses as a moderating factor in the relationship between earning volatility and corporate risk-taking is important. Earning volatility is a challenge for R&D expenditures, which may cause companies to face more risks in the market. On the other hand, in conditions of uncertainty, due to financial constraints, capital costs may increase and economic growth may decrease. This study evaluates the moderating effect of R&D expenditures and expands our understanding of the impact of earning volatility on corporate risk-taking.

In the following, after reviewing the theoretical basis and research background, the research hypotheses are presented and the methods used to test the hypotheses are explained. Finally, after presenting the research findings, the research topic is discussed and concluded.

2. THEORETICAL FOUNDATIONS

2.1. Corporate Risk-Taking

Organizational risk is often defined as changes in the cash flow stream or systematic or unsystematic changes in the stock return stream (Bromiley et al., 2001). Management risk-taking is conceptualized as real investment decisions that are characterized by having uncertain outcomes (Douras et al., 2008). Since future outcomes are uncertain, managers make estimates and judgments about the level and acceptability of the risks associated with the company's strategic decisions (Sitkin & Pablo, 1992).

Risk Acceptance

Research in the field of agency theory assumes that managers are more risk-averse than shareholders unless they are adequately incentivized or monitored (Eisenhardt, 1989). The behavioral model of agency theory also states that expectations theory and agency theory are complementary and assumes that managers, rather than being risk-averse, are language-averse. On this basis, when the decision-maker expects risk-taking to lead to positive outcomes, risk-taking is very likely; while if negative outcomes are expected, risk-taking is rejected (Adya & Grunebaum, 2006 and Bromiley et al. (2001) Finally, it is stated that individuals cognitively determine future consequences in the present and choose the options ahead based on the predicted consequences (Bandura, 2001). As a result, it can be stated that decision-making about risk-taking is different because individuals' cognitive assessments are different, which can be explained by power and behavioral theory. Thus, various factors derived from agency theory, expectations, and individuals' cognitive process of events can play a role in determining the level of corporate (managerial) risk-taking.

2.1.1. Earning volatility

With the development of economic relations with the outside world and the increasing number of foreign and domestic investors interested in investing in the stock market, economic stability in this market is expected to increase. The stock market is one of the main pillars of financial institutions and markets. Therefore, the need for more accurate and reliable forecasting of corporate profits with less volatility is becoming increasingly felt. Earning volatility, which is one of the time series characteristics of earning quality, is caused by many factors. Greater volatility leads to higher risk. The two main

reasons for earning volatility are economic factors and the way companies operate in the economic environment in which they operate. Economic shocks that are beyond the control of companies, such as exchange rate fluctuations, changes resulting from asset revaluations, and changes in bank interest rates, affect the performance of the business unit. Accounting factors, which are mainly related to the method and manner of recognizing revenues, expenses, and consequently the profit of the economic unit, can also have an impact on this mechanism.

2.1.2. R&D expenditures

Increased Risk-Taking:

• Investment in the future: R&D represents an investment in unproven ideas and technologies. Companies with high R&D expenditures are essentially gambling on the potential for future success. This can be seen as a riskier strategy compared to focusing on established products and markets(Abdoh & Liu, 2021).

• Uncertainty of outcomes: R&D projects often have uncertain outcomes. There's no guarantee that the research will lead to a successful product or service. This inherent uncertainty adds to the risk associated with high R&D spending(Banerjee& Gupta, 2017).

• First-mover advantage: Companies that invest heavily in R&D can potentially gain a first-mover advantage by bringing new products or technologies to market before competitors. This can lead to higher profits and market share, but it also requires taking a risk on something untested(Bansal et al. , 2013).

Decreased Risk-Taking:

• Innovation for efficiency: R&D can also be used to develop new processes and technologies that improve efficiency and reduce costs. This can ultimately lead to a more stable and less risky business model(Banholzer& Vosejpka, 2011).

• Developing defensive strategies: R&D can be used to develop defensive strategies to protect a company's existing market share from new technologies or competitors. By anticipating and addressing potential threats, companies can reduce their overall risk exposure(AlHares et al. , 2020).

• Risk mitigation through diversification: Companies might use R&D to diversify their product lines and enter new markets. This diversification can spread out risk and make the company less reliant on the success of any single product or service(Lou et al. , 2022).

2.2. Earning Volatility, Corporate Risk-Taking and . R&D expenditures

Corporate risk-taking is reflected by the trade-off between cash flow and uncertain risks in the investment decision-making process (Desineh et al. , 2022). In other words, corporate risk-taking is the level of risk that a company is willing to accept in pursuit of high returns in the face of future uncertainty. Corporate risk-taking reflects the company's risk attitude when making investment decisions. The higher the level of corporate risk-taking, the more likely it is that the company will choose high-risk projects with a positive expected net present value when making investment decisions (Zhang et al. , 2021). Corporate risk-taking behavior can range from safe risk levels, such as depositing money in banks, to high-risk levels, such as investing in unknown technologies or bringing new products to new or expanding markets. A company with a higher level of risk-taking is less likely to pass up high-risk, high-return investment opportunities (Chen and Ma, 2022). Also, expected future profits with unavoidable uncertainty are a determining factor for corporate risk-taking (Lang, 2019). In recent years, with the increase of economic uncertainty in the world, the issue of risk-taking has attracted extensive attention (Vural-Yavaş, 2020). One of the important prerequisites for a country's economic progress is the existence of a secure macroeconomic environment and economic stability (Wang and Zhu, 2022). Transparency in general economic policies and macroeconomic stability

provide a safe environment for the activities of economic actors (Zhou et al. , 2022). Earning volatility occurs when an economic entity cannot accurately predict whether, when, or how the government will change its current economic policy (Wang et al. , 2024). Earning volatility affects all economic sectors, more or less, because uncertainty is a broad concept that relates to macroeconomic phenomena such as GDP growth and microeconomic levels such as the growth rate of firms, as well as other events such as elections, wars, and climate change (Yin, 2020). With the significant impact of economic policy uncertainty on the behavior of a country's economy and other market institutions, in times of financial crisis, economic policy, compared to uncertainty in the real economy, accounts for a relatively high proportion of economic uncertainty (Zhou et al. , 2022). Levels of earning volatility can increase significantly during recessions as policymakers try to stabilize the economy and stimulate growth. Conversely, in boom periods, the economy does not require as much moderation or intervention. (Sari and Wijayati, 2024). Earning volatility is a systematic risk at the macroeconomic level that companies cannot avoid. Companies may become more conservative and may engage in active risk management behaviors when external uncertainty is high. By selecting stable investment projects, the overall risk level of the company can be controlled within a reasonable and tolerable range (Ozdemir et al. , 2022). In addition, earning volatility may affect corporate investment decision-making risk behavior by influencing management's risk attitude and loss expectations. When earning volatility is high, management's expectations for the future are more pessimistic, while investment decisions and behavioral patterns are more conservative and stable. As a result, high-risk, high-return investment projects can be easily abandoned (Zhou et al. , 2022). Shahzad and Fareed (2019) conducted a study to identify does firm life cycle impact corporate risk taking and performance on listed companisTehran The findings of the study suggest that there is a positive and significant relationship between economic policy uncertainty and corporate risk-taking. However, no evidence was found for the moderating role of government ownership in the relationship between economic policy uncertainty and corporate risk-taking. Zhang et al. (2021) examined relationship between Economic policy uncertainty and corporate risk-taking: Loss aversion or opportunity expectations of Chinese listed companies They found that economic policy uncertainty has a significant positive impact on corporate risk-taking. When economic policy uncertainty is high, the company's investment motivation is mainly opportunity expectations rather than risk aversion . Wen et al. (2021) examined how does economic policy uncertainty affect corporate risk-taking on Chinese listed companies. The empirical results of this study show that economic policy uncertainty can significantly reduce corporate risk-taking

H1: There is a positive and significant effect between earning volatility and corporate risk-taking

2.3. The Role of Research and development (R&D) expenditures on the Relationship between earning volatility and corporate risk-taking

R&D expenditures are a key measure for evaluating the degree of success of countries, industries, and firms in economic, commercial, and political competitive arenas . R&D is a process by which each company strives to outperform the other through better performance(Chen et al. , 2017). The survival of companies in a competitive environment forces companies to gain a competitive advantage, because gaining a competitive advantage means the market power of companies (Clampit et al., 2021). Companies, as an important issue, pay attention to R&D expenditures during the evolutionary periods of the industry. There are two competitive advantages. 1. Temporary competitive advantage that leads to high profits in a limited time; 2. Sustainable competitive advantage, which refers to the efficiency and competencies of the company, is not imitable, is important to customers, and brings about competent and competitive performance (Nur et al. , 2023). Companies compete with each other more in the product market to attract customers and market share, and the increase in the degree of competition leads to more uncertainty in the performance of companies, and the result of this uncertainty is uncertainty in the performance of entire industries or the entire economy (Zhou et al., 2022). A high level of risk-taking can optimize the allocation of company resources and increase the

competitive advantage and value of the company. This is an important factor for the long-term survival and development of a company (Olalere and Mukuddem-Petersen, 2023). The R&D expenditures that companies face are an important factor that affects risky investment decisions (Desineh et al. , 2024). Hou and Robinson (2006) adopted the performance-behavior-structure analysis paradigm and believed that market structure and the degree of competition affect the company's risky business decisions and the company's performance. The more R&D expenditures, the more motivated companies will be to pursue high-risk, high-return investment projects. In addition, these companies need higher returns, which is reflected in their high-risk, high-return preference and risk-taking (Das et al, 2024). Furthermore, more intense R&D expenditures show that the company faces stronger competitive pressure from other companies in the same industry. To prevent the loss of market share, it must be maintained and future development opportunities must be reviewed. Potential opportunities that arise through certainty lead to risks in pursuit of profit. At the same time, a higher degree of R&D expenditures can provide managers with more flexibility for decision-making, strengthen optimistic expectations for the future, and show a stronger willingness to accept risks Zhao and Su(2022 (2021) evaluated relationship between economic policy uncertainty and corporate financialization They found that companies with high levels of financial assets are more likely to avoid risk when economic policy uncertainty increases (Zhao and Su, 2022). . According to what was stated, the following is the second research hypothesis.

H2: R&D expenditures moderate the relationship between earning volatility and corporate risk-taking.

Data and descriptive statistics

Sample and data sources

The present study examines data for a sample of listed firms in Iraq Stock Market. The study period spans from 2014 to 2022. The original sample frame includes 35 listed firms for nine financial years. We have excluded banks and insurance companies because of their specific rules and regulations. Because some control variables are calculated by taking the first difference, the first-year data are not considered in the estimation. The final sample is an unbalanced panel comprised of 35 firms with a total of 315 firm-year observations. The data about firm-specific variables have been hand collected from the company

financial reports published annually by the Iraq stock website that contains the balance

sheets, income statements and information on several characteristics of Iraqi listed firms.

To estimate the model with combined data, both aggregation methods and panel data methods are used. To determine whether the use of panel data or aggregated data will be efficient in the present research models, the F-Limmer (Chow) test is used. to measure the non-collinearity between the explanatory variables of the research, the variance inflation factor (VIF) values are used. If the obtained critical value in the research models is less than 10, it indicates that the existence of multicollinearity will not cause any problems for drawing conclusions based on the model.

3. Model specification and estimation method

To test the research hypotheses, multivariate regression models were used based on Zhang, Yang, and Liu (2021). The following models were employed:

Equation (1) was used to test Hypothesis 1, and Equation (2) tested Hypotheses Model 1.

$$RiskT_{i,t} = b_0 + b_1 EVOL_{i,t} + b_2 LEV_{i,t} + b_3 Size_{i,t} + b_4 ROA_{i,t} + b_5 age_{i,t} + b_6\, QT\ obin's_{i,t} + b_7 Ownership_{i,t} + \sum_1^4 ind + \sum_{2014}^{2022} year + \varepsilon_{i,t}$$

$$RiskT_{i,t} = b_0 + b_1 EVOL_{i,t} + b_2 R\&D_{i,t} + b_3 (R\&D_{i,t} \times EVOL_{i,t}) + b_4 LEV_{i,t} + b_5 Size_{i,t} + b_6 ROA_{i,t} + b_7 age_{i,t} + b_8\ Q\ Tobin's_{i,t} + b_9 Ownership_{i,t} \sum_{1}^{4} ind + \sum_{2014}^{2022} year + \varepsilon_{i,t}$$

The Dependent Variable

$RiskT_{i,t}$: To measure the corporate risk-taking variable, following the research of Faccio, Modigliani, and Markowitz (2011), the rate of return on corporate assets, which is obtained from the ratio of earnings before interest and taxes (EBIT) to total assets, is used. In addition, to analyze the results of the research and ensure the reliability of the results, the return on equity, which is obtained from dividing operating income (loss) by total assets, is also used to measure this variable.:

$$Risk = \sum_{t=n-5}^{t=0} \sqrt{\frac{(ROE_{i,t} - AROE_{i,t})^2}{N}}$$

$$ROA_{i,t} = net\ profit\ to\ Asset$$

$$AROE_{i,t} = Industry\ Average\ ROA$$

Variable description

Independent Variable

$EVOL_{i,t}$: Earnings volatility is calculated by taking the standard deviation of the deflator earnings for the most recent twelve quarters (Chen et al, 2008)

Moderating Variable

$R\&D_{i,t}$: R&D expenditures to totall Asset (Abdoh & Liu, 2021).

Control Variable

LEV: This variable equals the ratio of total debts to total assets in the current year.

Return on Assets (ROA): The result of dividing the net profit by the total assets' book value(Banos-Caballero et al., 2014).

$QT\ obin's_{i,t}$**:** QTobin's is a common measure for company value. This measure is market-based and is considered a primary dependent variable. It has a forward-looking aspect and may capture the company's performance (Gerged et al., 2021). Tobin's Q is calculated as the ratio of total assets minus the book value of equity plus the market value of equity to total assets. This measure operates better than other accounting ratios and is less impacted by accounting practices

.$Firm\ Size_{i,t}$**:** Following Zhang et al. (2021), it is obtained by taking the natural logarithm of the total assets of the company (i) in year (t).

$Ownership_{i,t}$:Following Zhang et al. (2021), major shareholders who hold more than 5% of the company's shares are considered as ownership concentration

$age_{i,t}$:It is defined as the natural logarithm (years of the company's stock

exchange life) (Facio, 2011)..

4. RESULTS

Table 1. The descriptive statistics.

4.1. ***Data on Descriptive Statistics***

The initial stage in managing a set of statistical data includes the process of classifying, describing and analyzing data with the aim of extracting and quickly summarizing hidden information in the data set. Descriptive statistics (mean, median, standard deviation, maximum, minimum) obtained from the research are shown in Table 1. that the risk tolerance of the company, which has an average of 0.15, and shows that the risk tolerance of Iraqi companies is relatively high. The independent variable, which is Earnings volatility, has a mean and median of approximately 8%. What is clear is that more than half of the companies have had a earnings volatility of more than 6%, the maximum observation is 44% and the minimum is 0.1%, which shows that companies in Iraq have low earnings volatility. The R&D moderating variable has an average of 0.035, which shows that in Iraqi companies, the average score of the companies is almost 3 percent of assets invested in research and development. The control variable of company size has a mean of 22.349 and a median of 22.290, which indicates that the numbers are close to each other.

Table 1. Descriptive statistics of main variables

Variables	Average	Mediean	STD	Min	Max
RiskT	0/156	0/095	0/172	0/04	0/809
EVOL	0/087	0/069	0/172	0/001	0/434
R&D	0/035	0/011	0/052	0/000	0/248
LEV	0/319	0/224	0/314	0/003	1/782
ROA	0/044	0/016	0/198	-0/793	0/701
AGE	3/731	3/871	0/367	2/564	4/317
Ownership	0/525	0/541	0/161	0/005	0/756
Tobin's Q	2/209	1/830	1/482	0/044	6/949
Size	22/481	22/385	1/413	19/321	26/895

4.1. Data Analysis and Main Results

Table 2 presents the correlation analysis of research variables. The results demonstrate a positive correlation between EVOL and RiskTaking at the 99% confidence level (coefficient: 0.001).

Table 2. Correlation analysis of research variables.

	RiskT	***IBVOL***	***R&D***	***Size***	***LEV***	***ROA***	**Qtobin**	***AGE***	***Ownership***
RiskT	1.000								
IBVOL	0.249***	1.000							
R&D	-0.028	0.137	1.000						
Size	-0.015	0.069	0.031	1.000					
LEV	-0.074	-0.035	-0.021	0.058	1.000				
ROA	-0.035	0.023	-0.200	-0.035	-0.035				
Qtobin	-0.048	0.064	-0.275	0.175	0.054	1.000			

AGE	0.020	0.053	0.060	0.132	-0.056	0.263	1.000		
Ownership	-0.090	0.057	0.000	-0.190	0.089	-0.580	-0.489	1.000	
	-0.046	0.043	0.01	-0.070	-0.050	-0.068	-0.167	0.141	1.000

*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Resource: Research findings

All variables are stable, as illustrated by the fact that the significance level is less than 0.05 in the table above**.**

Table 3: The results of Levin, Lin Vecho's unit root test

Variable	**p-value**
IBVOL	0.000
R&D	0.000
Size	0.000
LEV	0.000
ROA	0.000
Qtobin	0.000
AGE	0.000
Ownership	0.000

This study employed the Durbin and Wu–Hausman test to test endogeneity. The results of this test for research equations are reported in Table 5. Since the p-value is larger than 0.05, there is no endogeneity for the models.

Table 4. Results of Durbin–Wu–Hausman test

Equation	**Test**	χ^2	**p-value**	**Result**
1	Durbin	$\chi^2 = 1.754$	0.463	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=0.911	0.532	H0 is not rejected (there is no endogeneity)
2	Durbin	$\chi^2 = 2.130$	0.378	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=1.600	0.497	H0 is not rejected (there is no endogeneity)

In accordance with the integration test results in Table 5, the null hypothesis of data integration at the 99% confidence level is not rejected. Therefore, a pool data model should be utilized to estimate the coefficients of these models.

Table 5. The results of pooling

Equation	**F Statistic**	**p-value**
1	1.356	**0.106**
2	1.145	0.157

Table 6. The results of the first and second models

Variable (BF)	GLS Regression Equation (1):					2SLS Regression Equation (2):			
	Coef	Std. Err	Statistic t	Prob	VIF	Coef	Std. Err	Statistic t	Prob
$EVOL$	0/956***	0153	7/288	0/000	1/27	0/721***	0191	6/764	0/000
$R\&D$	-	-	-	-		-0/079	0/384	-0/207	0/836
$R\&D \times EVOL$	-	-	-	-		-1/216	2/967	-0/409	0/682
$Size$	0/779	-0/002	0/007	-0/279	0/779	-0/001	0/007	-0/259	0/795
LEV	0/136	-0/051	0/034	-1/492	0/136	-0/053	0/034	-1/539	0/124
ROA	0/514	-0/035	0/054	-0/653	0/514	-0/050	0/056	-0/885	0/376
$Q\ Tobin's$	0/258	-0/008	0/007	-1/132	0/258	-0/005	0/007	-0/770	0/441
Age	0/995	-0/000	0/028	-0/005	0/995	0/001	0/028	-0/029	0/976
$Ownership$	0/160	-0/121	0/086	-1/407	0/160	-0/122	0/086	-1/405	0/161
_cons	12.941***	2.922	4.430	0.000	1.183	-0/38	1/07	-0/35	0/72
χ^2 Statistic	3.55(0.000)						3.1942(0.005)		
R^2	0.116						0.103		
Adjusted R^2	0.101						0.095		
Durbin-Watson Statistic	2.117						2.076		
AIC	761.46						643.156		

results of table 6 shows that Earning Volatility has a positive significant relationship with the $Risk\ Taking$ with 0/956 coefficients. Therefore, the first hypothesis of the research is supported Significant at the 0.01 level .The value of the adjusted coefficient of determination in Iraq is 10.01% of the changes in the dependent variable explained by the independent variables of the model. Also, the values of the variance inflation statistic (variance inflation < 5) indicate that there is no linearity between the independent variables of the research.

According to the coefficient in the second model, R&D does not play a significant moderating role on the relationship between earning volatility and risk taking with , so the second hypothesis of the research is not confirmed, therefore, R&D does not moderate the relationship between Earning Volatility and $Risk\ Taking$. The value of the adjusted coefficient of determination is 0.95% of the changes in the dependent variable explained by the independent variables of the model. Moreover, the values of the variance inflation statistic (variance inflation > 5) indicate that there is no linearity between the independent variables of the research.

5. DISCUSSION AND CONCLUSION

We examined the relationship between earning volatility and corporate risk-taking from an emerging market. Our findings indicate that there is a positive significant relationship between earning volatility and corporate risk-taking. This means that earning volatility leads to stronger risk-taking incentives; that is, when earning volatility increases, the company's investment motivation is primarily driven by opportunity expectations rather than risk aversion. The more economic policy uncertainty increases, the more companies are willing to take risks in order to adapt to the market, achieve desired performance, and take advantage of profit opportunities. In other words, companies in emerging markets are more willing to invest when they experience policy changes until the earning volatility is resolved. Companies often adapt to economic policy uncertainty and increase their investments in order to gain a competitive advantage, and even choose high-risk investment projects in order to achieve higher returns compared to other competitors. This is consistent with research

findings (Zhang et al.,2021). in addition, we couldn't find evidence to show moderating role of R&D expenditures on relationship earning volatility and corporate risk-taking. . Similarly, the estimated results of the moderating effect of their study indicate that for a high level of companies with financial assets, with increasing R&D expenditures, the positive and significant effect of earning volatility on corporate risk-taking decreases significantly. The empirical findings confirm that companies with high levels of financial assets are more likely to avoid risk when earning volatility increases. In other words, they are more likely to tolerate risk in conditions of competition and significant demand for the company's products compared to a neutral market. With increasing R&D expenditures, companies can be expected to improve product quality, price stability, and careful analysis of earning volatility conditions in order to maintain competition and capture a larger market share. Companies with high levels of financial assets, when R&D expenditures increase, strive more to reduce the risks associated with economic policy uncertainty through effective management of investments in sustainable assets and sustainable long-term profits. The results of od second hypothesis is not supported because for unfavorable economic conditions in Iraq. and also for lack of transparency,unclear rules and regulations in Iraq market..

Recommendations

Based on the findings of the research, the government can make decisions in the face of economic policy uncertainty that aim to reduce earnings volatility and increase economic stability. Researchers, given the current economic conditions in the country, which are characterized by high uncertainty and have affected economic activities, can conduct research on this topic that not only expands the effects of macroeconomic policies and the behavior of small companies, but also provides important information on the development of companies and the formulation of macroeconomic policies; Economic actors can improve their ability to identify potential risks and opportunities, avoid "bad" uncertainties, and fully understand and use "good" uncertainties to achieve the ultimate goal of sustainable operations and maximize value. Auditors can help company managers adopt better risk management strategies by reviewing financial calculations and risks associated with economic policy uncertainty.

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