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IMPACT OF ENTERPRISE RISK MANAGEMENT ON FIRM VALUE DURING THE INSTABILITY CONTEXT: CASE OF VIETNAM

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ABSTRACT

This paper is aimed at investigating the impact of Enterprise Risk Management (ERM) on firm value in Vietnam. Data is collected from 345 publicly traded companies on the Vietnamese stock exchange, covering 1,380 firm-year observations from 2018-2021. Then, the research team applied the quantitative methodology by using panel data with the model of a general least square (GLS) to evaluate the effect of ERM on firm value. In this study, we investigate the existence of appropriate ERM practices in Vietnamese businesses and their potential to enhance business value. The key results provide compelling empirical support for the advantage of effective ERM adoption in improving firm value in Vietnam. In addition, our findings point out that most of the factors examined, namely ROA, Firm Size, Total Asset Turnover, and Dividends show a significant positive effect, whereas Geopolitical Instability, Financial Leverage, and Firm Age are found to negative impact on firm value and Sales Growth has an insignificant relationship with the change in the value of the firm. Based on the results, our suggested recommendations are that companies should pay more attention to adapting and performing enterprise risk management in order to maximize the value, especially during a period of ongoing geopolitical instability.

Keywords: *Enterprise risk management, Business performance, Geopolitical instability, Firm value, Vietnamese stock exchange.*

INTRODUCTION

In recent years, the Vietnam Stock Exchange has been an open market with participation from many businesses. With so many businesses available on the market today, dangers are unavoidable. The recent financial crisis, which began in the US in 2007, has once more made risk management a major focus. Enterprise Risk Management (ERM) is now being considered by businesses, government regulators, stock exchanges, consulting firms, rating agencies, and universities as a means of addressing economic complexity. In terms of the value of the firm, Tobin's Q is the most used instrument for evaluating value. Based on the relevant literature, we identify nine specific firm factors that are believed to have an impact on firm value. These factors are (1) Enterprise Risk Management, (2) Return On Assets, (3) Geopolitical Instability, (4) Financial Leverage, (5) Firm Size, (6) Firm Age, (7) Total Asset Turnover, (8) Dividends, and (9)

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Sales Growth. We also focus on the association between firm value and geopolitical instability, which refers to environmental disasters, increasing poverty, inflation, political instability, and economics.

The literature in finance is abundant in terms of the factors that affect firm value, but little has been published about the relationship between firm value and ERM, particularly in the Vietnam context, especially since there has been no significant research to suggest and encourage companies' understanding of how to apply reality to risk management. That is why this research paper will be done to resolve the problems surrounding the use of risk management by companies that are listed on stock exchanges, offering suitable answers and recommendations for businesses going forward in increasing firm value.

Literature Review

Enterprise Risk Management

Concept of Enterprise Risk Management

Risk management is a crucial component of quality management practices and excellent corporate governance of any firm, focusing on finding the right balance between profitability and risk to maximize shareholders' value (Pagach & Warr, 2010). In the mid-1990s, the concept of risk management evolved toward an integrative, holistic dimension and recommended managing the risk portfolio throughout the entire organization.

According to Chapman (2003), ERM is content for identifying and analyzing risk from an integrated, enterprise-wide perspective. Besides, and perhaps most significantly, COSO, which is mostly credited with creating the ERM framework, has characterized ERM as follows: "a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives (COSO, 2004)". In brief, ERM is the term used to describe techniques and procedures employed by businesses to control risks and seize opportunities from an enterprise-wide perspective.

Measurement of Enterprise Risk Management

A dummy variable for ERM implementation is utilized as an independent variable. If a company implements an ERM system, it takes value 1, otherwise, it takes value 0. Following Hoyt and Liebenberg (2011), the companies whose annual reports have the following key terms and their acronyms were determined to be using an ERM system. These terms include "enterprise risk management," "strategic risk management," "corporate risk management," "consolidated risk management," "holistic risk management," "integrated risk management," "risk management committee," "risk committee," and "chief risk officer" (CRO).

Firm Value

Concept of Firm Value

The value of a firm is the sum of the present value of all the future incoming cash flows that it will generate (Daeli & Endri, 2018). In general, a company's primary goal is to boost owner and shareholder welfare in order to raise the company's worth. According to Tahir and Razali (2011), regarding the business value, discounted cash flow valuation is the fundamental method used to determine the firm's worth. Additionally, firm value is also known as an economic

statistic that depicts the company's market value (Chong *et al.*, 2019). The growth in market share can be seen as improving the welfare of owners and shareholders.

Measurement of Firm Value

In order to measure firm value, we use Tobin's Q calculated as the market value of equity plus the book value of liabilities divided by the book value of total assets (Silva *et al.*, 2019). When Tobin's Q value is larger (less than one), the firm's resources are being utilized effectively (ineffectively) (Lindenberg & Ross, 1981). Additionally, because the advantages of adopting an ERM strategy are typically recognized over time rather than right away, Tobin's Q, which assesses the company's performance in the future, is the best way to determine how it will affect firm value (Hoyt & Liebenberg, 2008). Following Da Silva *et al.* (2019), we calculate Tonbin's Q as follows:

TOBINQ = (Market value of equity + Book value of liabilities) / Book value of assets (1)

Impact of Enterprise Risk Management on Firm Value

ERM has positive impacts on firm value due to the fact that ERM informs management of various kinds of risks to reduce costs related to imperfect capital markets. In one of the earliest studies, Nocco and Stulz (2006) used risk-return theory which suggested that by optimizing their risk/return tradeoff, organizations were to gain from the firm's extensive risk collection feature bringing them a long-term competitive advantage. In Asian economies, Iswajuni *et al.* (2018) concentrating manufacturing companies in Indonesia for the period 2010–2013 showed that besides size and profit, the implementation of ERM is one of the company's mechanisms that can affect the value of the company. In the first quantitative multimethod design, Ali Kinyar (2020) collecting information from 137 organizations in North America in 6 months indicated that the firm value can be increased through carefully implementing ERM. Consistently, India research by Janardhanan and Ramkumar (2022) about the manufacturing sector also suggested that the more ERM information published by the company, the higher the company's value.

However, in a few studies, it had negative impacts on firm value due to the complexity and the high cost of ERM. Conducting research in 105 insurance companies in the U.S. market during the period 2000–2007, Yijia Lin *et al.* (2012) study regarding how the market responds to ERM adoption displays a significantly negative relation by a reduction of 5% Tobin's Q as adopting ERM. These points are supported further by Sari and Witjaksono's (2021) findings illustrating information relating to ERM issues is what contributes to the decline in corporate value.

Moreover, many research papers found that there is an insignificant relationship between ERM and firm value. Examining the effect of ERM implementing principles on firms' long-term performance, Pagach and Warr (2010) failed to find support for the proposition that ERM is value-creating. Similar to Tahir and Razali (2011) with data collected from 528 Malaysian firms in 2007, Anton (2018) indicated that during times of economic and financial turbulence, ERM has no noticeable impact on firm value.

From the above studies, it can be seen that the relationship between ERM and firm value has received high attention from scholars all over the world. However, the research on this problem is still very limited in Vietnam. Starting with the first analysis mentioning the effect of ERM implementation on firm value in Vietnam, John *et al.* (2016) identified a growth in firm value

of businesses adopting ERM through the cross-sectional sample of 199 companies listed on both Ho Chi Minh and Hanoi Stock exchanges. Following that, Thuy Duong Phan *et al.* (2022) focusing on 77 Vietnam industry enterprises from 2012 to 2018 contributed to the empirical evidence on the value of ERM by pointing out that ERM positively impacts Tobin's Q at a significance level < 1%.

Impact of Geopolitical Instability on Firm Value

Besides ERM, the influence of geopolitical risk, which can be defined as the impact of the Covid-19 pandemic, conflict situation, military-related tensions, and war threats, on firm value has also shown various potential results in our research paper. Due to the article "Impacts of the COVID-19 pandemic on the operations of banks listed on the stock exchange" (Review of Finance - 2021) and Thuy *et al.* (2022), since 2020 the COVID-19 pandemic had a negative influence on banks' financial performance in the Vietnam stock exchange because of the negative effects of loan size and the pandemic's decreased beta coefficient of credit efficiency. Furthermore, the increasing geopolitical risks imposed on Russia's invasion of Ukraine brought a negative impact on the world economy in 2022, such effects are indicated to greatly increase inflation and decrease GDP (FED - Dario Caldara, 2022). However, relatively little research has been published recently demonstrating the effect of this variable on business value. Our research will examine this case with valuable conclusions.

Impact of the Firm's Characteristics on Firm Value

Firm value is strongly affected by the firm's characteristics such as *return on assets (ROA)* (Lechner & Gatzert, 2018), *financial leverage* in terms of optimizing value (Tran, 2019; Trang & Huyen, 2021), *firm size* with operation activities to increase revenues (Dang *et al.*, 2019; Do *et al.*, 2020; Trang & Huyen 2021), *firm age* (Nguyen & Nguyen, 2019; Phan, 2019; Thu *et al.*, 2021), *total asset turnover (TATO)* (Lumapow & Tumiwa, 2017; Harahap *et al.*, 2020; Tu & Linh, 2022), *dividends* (Chong *et al.*, 2019; Kinyar, 2020), and finally *sales growth* (Wies *et al.*, 2019; Munandar & Alvian, 2022). In more detail, the variables that are mostly shown to have a positive impact on firm value are ROA, firm size, firm age, TATO, dividends, and sales growth; whereas leverage is on the opposite side.

MATERIALS AND METHODS

Sample and Data

The data of firms listed in two stock exchanges HOSE and HNX during 2018 - 2021 are selected for this study. The period 2018-2021 was chosen because geopolitical instability occurred during this time, including The US-Iran War (Kaur *et al.*, 2020), and Covid-19 (Savitri *et al.*, 2022). The Global Industry Classification Standard (GICS), created by MSCI and S&P Dow Jones Indexes, is used to categorize listed firms. Businesses are classified into 11 different fields. A total of 1380 observations from 345 companies are included in the sample. Data on Tobin's Q, Enterprise Risk Management, and firm characteristics for the years 2018 through 2021 is collected from the company's annual reports and financial statements. The data on geopolitical instability is based on the current state of affairs.

Research Model and Hypotheses

Örgütsel Davranış Araştırmaları Dergisi
Journal of Organizational Behavior Research
Cilt / Vol.: 8, Sayı / Is.: 2, Yıl/Year: 2023, Sayfa/Pages: 236-250

In order to address this study's research objectives, panel data analysis with different estimation models such as the pooled estimation model (Pooled OLS), fixed effects model (FEM), and random effects model (REM) was performed to analyze how ERM adoption impacts on the value of the firm. A fixed effects panel regression analysis has been chosen after providing a Hausman test for comparing fixed and random effect models. Then, generalized least squares (GLS) regression will be done to explore the relationship between ERM implementation and firm value as it allows estimation in the presence of autocorrelation and heteroskedasticity. Here is our research model:

$$TOBINQ = \alpha + \beta 1ERM + \beta 2GEO + \beta 3LEVER + \beta 4SIZE + \beta 5ROA + \beta 6AGE + \beta 7TATO + \beta 8DIV + \beta 9SALE + \varepsilon it \quad (2)$$

The summary of the research model framework and hypotheses are summarised in **Figure 1** below.

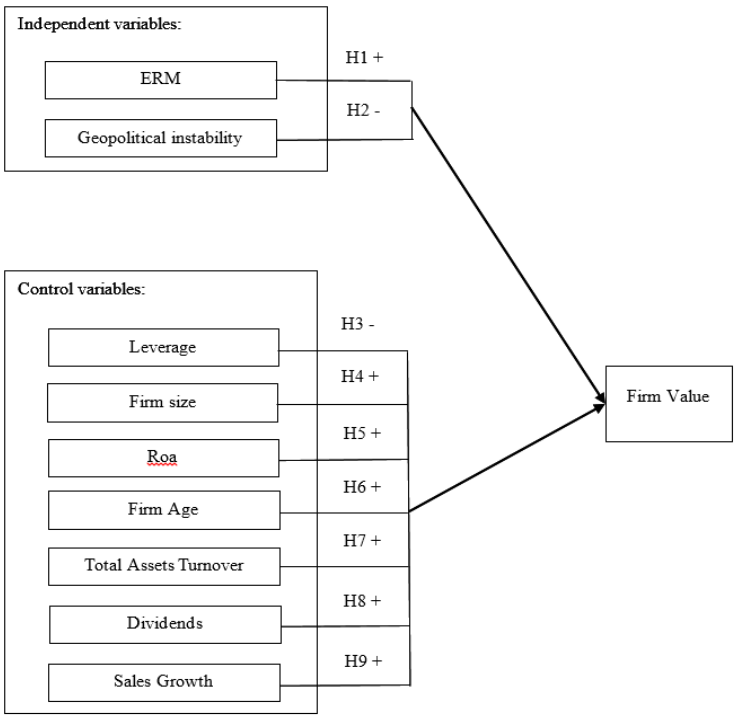

Figure 1. Model framework and hypotheses

Of which, the variables in the research model are presented in **Table 1**:

Table 1. Variables in the research model

Variables	Definition	Measurements	Reference
	Dependent Variables		
Tobin's Q (TOBINQ)	Firm value reflects the firm's current intrinsic value but also the likelihood that it will be able	TOBINQ = (market value of equity + book value of liabilities)/ book value of assets	Da Silva *et al.* (2019), Khan *et al.* (2021), Zuhroh (2019)

	to increase its wealth value in the future.		
Independent Variables			
Enterprise risk management (ERM)	ERM is a process that identifies, assesses, and manages individual risks within a coordinated framework	1 = if the firm implements an ERM system, 0 = otherwise	Anton (2018), Lechner and Gatzert (2018)
Geopolitical instability (GEO)	Geopolitical instability includes events such as terrorism, wars, international conflicts, border disputes, etc.	1 = period of Covid 19 and the US-Iran war (2020 - 2021), 0 = period of 2018-2019	Thuy *et al.* (2022), Shahzad *et al.* (2023)
Control Variables (Firm characteristics)			
Financial leverage (LEVER)	Leverage refers to the strategic practice of borrowing funds to invest in assets.	LEVER = book value of liabilities/market value of equity	Bohnert *et al.* (2017), Trang and Huyen (2021), Tran (2019)
Firm size (SIZE)	The size of a firm increases with its overall assets and sales.	SIZE = natural log of the book value of assets	Trang and Huyen (2021), Dang *et al.* (2019), Ibrahim and Isiaka (2020), Lechner and Gatzert, (2018)
Return on assets (ROA)	ROA is a measurement that reflects the accounting performance of the company.	ROA = net income/book value of total assets	Lechner and Gatzert (2017, 2018).
Firm age (AGE)	Firm age is defined as the number of years that the company was listed on the stock exchanges.	AGE = number of years since a firm's listing	Silva *et al.* (2019), Nguyen and Nguyen (2019), Phan (2019)
Total assets turnover (TATO)	Total assets turnover shows how much a company can be effectively and efficiently in managing its assets in sales; and how fast the turnover of assets is to support sales.	TATO = Net sales/Assets	Harahap *et al.* (2020), Lumapow and Tumiwa (2017), Bahraini *et al.*, (2021), Tu and Linh, (2022)
Dividends (DIV)	Dividends are utilized for investment decision-making, profitability analysis, profit-related risk assessment, and stock price evaluation.	1 = firm paid a dividend in the current year, 0 = otherwise	Kinyar (2020), Chong *et al.* (2019)
Sales Growth (SALE)	Sales growth quantifies the rate at which a company has increased its sales and reflects the firm's ability throughout time.	SALE = (Current period net sales – previous period net sales)/ previous period net sales	Silva *et al.* (2019), Alvian and Munandar (2022), Wies *et al.* (2019)

Sources: Authors' summary from literature review

Örgütsel Davranış Araştırmaları Dergisi
Journal of Organizational Behavior Research
Cilt / Vol.: 8, Sayı / Is.: 2, Yıl/Year: 2023, Sayfa/Pages: 236-250

RESULTS AND DISCUSSION

Descriptive Statistics of Variables

Table 2 shows descriptive statistics for the relevant variables of ERM implementation, which are based on the total number of 1380 firm-year observations. The statistical table has listed the mean, standard deviation, minimum and maximum values of ERM, GEO plus control variables affecting *Firm Value*.

Tobin Q's average value is 1.21 with a standard deviation of 0.55, showing that the sample's firm value is distributed centrally in the lower part of the data range (minimum 0.29 and maximum 4.99). ERM has a mean of 0.46, which is suitable for the current situation, in which Vietnam companies are increasingly investing in adopting the ERM system.

The sample's mean for Firm Size is 28.65, which may signify that medium-sized businesses make up the majority of the sample. With a mean of 1.87, Financial Leverage indicates that, on average, the sampled companies are too indebted. The typical business in the sample, according to ROA's mean value of 6.05, produces a positive return on its assets. Yet, the sample's profitability appears to vary widely, as indicated by the sample's standard deviation of 6.95.

Total Assets Turnover has a mean of 0.89, which means that, on average, the sampled companies are making less money from sales per dollar of assets they own. This can be a sign that the companies are not making the best use of their resources.

Table 2. Descriptive result

Variable	Obs	Mean	Std. Dev.	Min	Max
TOBINQ	1380	1.21	0.55	0.29	4.99
ERM	1380	0.46	0.50	0	1
GEO	1380	0.50	0.50	0	1
SIZE	1380	28.65	1.72	24.31	34.97
LEVER	1380	1.87	2.52	0	19.19
ROA	1380	6.05	6.95	-25.55	47.51
TATO	1380	0.89	0.94	0	8.17
DIV	1380	0.62	0.49	0	1
SALE	1380	0.12	0.45	-1.05	3.74
AGE	1380	9.72	5.07	1	23

Source: Authors' compilation from data processing

With the mean of 0.62 and 0.12 respectively for dividends and sales growth, they imply that more than half of companies have paid dividends while the recorded sales growth rates of businesses are not so ideal in recent years. The average age of the sampled firms is 9.72, which indicates that businesses in the sample have been listed on stock exchanges for over 9 years on average. The huge standard deviation of 5.07, however, shows a significant difference in firm age throughout the sample.

Empirical Findings on the Factors That Influence the Firm Value

The Correlation Between Variables

Table 3 reports the correlation analysis of the determinants, Tobin's Q, and ERM. This matrix provides initial evidence that firm value is dependent on most of the design choices identified in Section 3.2, at least in bivariate analysis. This table also shows that the design choices are to some extent interrelated, as many correlations between the independent variables are significant. The correlations are, however, low enough not to signal multicollinearity issues.

Table 3. Pearson correlation coefficients (N = 1380)

	TobinsQ	ERM	GEO	SIZE	LEVER	ROA	TATO
TobinsQ	1						
ERM	0.1229	1					
GEO	0.1859	0.0858	1				
SIZE	0.0151	0.3437	0.0468	1			
LEVER	-0.0859	0.2377	-0.0173	0.5087	1		
ROA	0.4581	-0.0495	-0.0840	-0.1734	-0.2556	1	
TATO	0.0197	-0.0997	-0.0529	-0.2551	-0.1475	0.1490	1
DIV	0.1547	-0.0909	-0.0612	-0.1404	-0.2183	0.3744	0.2128
SALE	0.0233	0.0402	-0.0365	0.071	0.0529	0.1421	0.0065
AGE	-0.0480	-0.0314	0.1852	-0.0481	-0.1225	-0.0068	0.091

	DIV	SALE	AGE
DIV	1		
SALE	-0.0076	1	
AGE	0.099	-0.1238	1

Source: Authors' compilation from data processing

Analysis Comparison

The second main objective of our paper is to estimate factors affecting firm value, using Tobin's Q as a proxy for firm value by running a linear regression for the period of 4 years from 2018 to 2021. Firstly, we ran the White Test for Heteroskedasticity to examine whether the variance is homogeneous **(Table 4)**. With Prob > chi2 = 0.000 < 0.05 (5%), therefore, accept the hypothesis Ha: The variance is heterogeneous, that is, the variance varies. The results from the OLS model may be biased due to variable variance (after running the white test), hence, the group author continues with the fixed effect model (FEM). Next, the study continues to use static models to analyze panel data, namely the random effects model (REM) and fixed effect model (FEM) using Hausman's test to compare and realized that the FEM model is superior **(Table 4)**. To continue testing the model for errors, we ran the Wald test plus the Wooldridge test and recognized that the FEM has the phenomenon of heteroskedasticity and autocorrelation **(Table 5)**. Therefore, to overcome these problems, the team decided to use the GLS model.

Table 4. White Test for Heteroskedasticity & Hausman test FEM REM

White's test for Ho: homoskedasticity against Ha: unrestricted heteroskedasticity	
chi2(51)	455.20

Örgütsel Davranış Araştırmaları Dergisi
Journal of Organizational Behavior Research
Cilt / Vol.: 8, Sayı / Is.: 2, Yıl/Year: 2023, Sayfa/Pages: 236-250

Prob > chi2	0.000
Hausman test for FEM & REM comparison	
chi2(9)	166.95
Prob>chi2	0.000

Source: Authors' compilation from data processing

Table 5. Modified Wald - test & Wooldridge test

Modified Wald test for groupwise heteroskedasticity	
chi2(345)	8.4e+05
Prob > chi2	0.000
Wooldridge test for autocorrelation in panel data	
F (1,344)	52.406
Prob > F	0.000

Source: Authors' compilation from data processing

Regression Results

Generalized Least Squares (GLS) are regarded as the best data-running method out of the four. Only one variable is statistically insignificant, which eliminates the drawbacks of other approaches and allows for a more accurate understanding of the interrelationships between variables.

Table 6. Analysis comparison between REM, FEM, Pooled OLS, and GLS

	Pooled OLS	FEM	REM	GLS
ERM	0.122***	0.0156	0.0850**	0.0844***
	[4.54]	[0.34]	[2.48]	[6.54]
GEO	0.251***	0.0478	0.216***	0.161***
	[9.78]	[1.62]	[12.22]	[17.99]
LEVER	-0.00446	-0.0142	-0.0165**	-0.00655***
	[-0.75]	[-1.25]	[-2.09]	[-2.79]
SIZE	0.0192**	0.0750**	0.0266**	0.0140***
	[2.15]	[2.41]	[1.98]	[3.16]
ROA	0.0389***	0.00712***	0.0175***	0.0279***
	[19.33]	[3.52]	[9.31]	[25.28]
AGE	-0.00973***	0.0826***	-0.00252	-0.00610***
	[-3.81]	[5.92]	[-0.61]	[-5.18]
TATO	-0.00679	0.0515	0.00574	-0.0135**
	[-0.49]	[1.45]	[0.28]	[-2.03]
DIV	0.0100	-0.0202	-0.00953	0.0291***
	[0.35]	[-0.79]	[-0.38]	[2.77]
SALE	-0.0698**	0.0563***	0.0309	0.00546
	[-2.45]	[2.85]	[1.54]	[0.63]
_cons	0.354	-1.832**	0.245	0.546***
	[1.40]	[-2.08]	[0.64]	[4.40]

N	1380	1380	1380	1380
R-sq	0.289	0.218		
t statistics in brackets				
* p<0.1, ** p<0.05, *** p<0.01				

Source: Authors' compilation from data processing

Notes: See **Table 1** for variable description; ***, **, *: statistical significance at the 99%, 95%, 90% confidence level; sample with data from 2018 - 2021; number of observations = 1380. The number before the asterisk is the Coefficient. The data in square brackets is the value z.

Result Discussions

From the regression results, 5 out of 9 variables including ERM, *Geopolitical Instability*, *Firm Size*, ROA, and *Dividends* illustrate a positive relationship with firm value. Meanwhile, *Financial Leverage*, *Firm Age,* and *Total Asset Turnover* negatively influence the development of firm value. This result also points out that *Sales Growth* non-statistically changes firm value.

ERM has a positive and statistically significant influence on company value. This supports the assumption H1 that firms with an integrated holistic ERM program can gain a competitive advantage, and is consistent with Hoyt and Liebenberg (2008, 2011), Phan *et al.* (2020), Janardhanan and Ramkumar (2022). In Vietnam, ERM helps increase project success rates by selecting good projects, defining project scope, developing realistic estimates, and targeting the most important goals. Risk management can point out and eliminate unnecessary redundancies, and costs incurred in the process of investment, production, and business development.

The empirical findings contrast our hypothesis H2 on *Geopolitical Instability* regarding the value relevance of firm value, showing a positive result. This can be explained by the period we conducted the research, as Vietnam's macroeconomic policies have contributed to stabilizing the bad situation caused by shocks and uncertainties. Additionally, the exploration of the Vietnam stock market has led to significant growth in the firm value of companies on the stock exchange. Among the 11 industries, there are a group of industries that are not only unaffected by the unstable environment surrounding them but also receive a lot of growth opportunities.

In accordance with assumption H3, an increasing *Financial Leverage* has a negative effect on Tobin's Q. This is relevant to Vietnam's case when the more financial leverage means the greater the corporate gets outside funds; as a result, a high debt to equity increases default risk and causes the firm's owners to bear financial distress costs. This is also supported by research in Vietnam (Trang & Huyen, 2021), North America (Kinyar, 2020), and cross-economy (Bertinetti *et al.*, 2013).

Notably, *Firm size* and *ROA* are also 2 factors that have a positive relationship with firm value. This outcome accords with our hypotheses H4, and H5 and the context of Vietnam when the investors frequently utilize information about the size and profitability of the company in conducting investment valuations that can ultimately increase the value for the company. The results are consistent with Iswajuni *et al.* (2018), Ali Kinyar (2020), and Sari and Witjaksono (2021). They explained that larger firm size tends to receive more benefits and show better performance because large firms are generally already more mature while profitability growth improves financial performance which will potentially raise the stock price to maximize firm value.

Furthermore, our statistics also find the *Age* of an enterprise is a factor that negatively influences firm value. This result is consistent with our hypothesis H6 and the previous research of Kang (1998), John *et al.* (2016), and Luu (2021). It can be explained because early-generation family founders outperform their descendants in venerable Vietnamese businesses and newly listed companies often receive more expectations for a breakthrough from investors than long-standing companies. In addition, as those businesses grow, management becomes more complex, lowering the firm's value (Kang, 1998).

The *Total assets turnover* regression result is in contrast with our predicted sign and previous research such as Lumapow and Tumiwa (2017). Thus, hypothesis H7 is not supported, which implies total asset turnover also negatively affects firm value in Vietnamese enterprises. Because a high level of output without thorough quality control over the goods produced could negatively affect the company's reputation, this illustrates that a high level of productivity does not always increase the company's worth (Suhendra, 2015).

In addition, as we expected, *Dividends* are also a factor that affects firm value (H8 is accepted). The positive relationship between dividend payments and firm value is suitable to the Vietnam context because payouts are normally considered as the firm capability to generate cash which indicates a positive signal about their financial health. The result of this study is similar to the finding of Hoyt and Liebenberg (2011), and Hung Ngoc Dang *et al.* (2019) but in contrast to the study of Lechner *et al.* (2017).

Unlike our initial expectation, the variable *Sales Growth* shows no significant relation with firm value. The outcome showing that high or low sales growth does not exactly reflect the expectations of investors for a firm is in line with previous research by Thuy Duong Phan *et al.* (2022) conducted in Vietnam industry enterprises. Besides, there are a huge amount of research papers in accordance with this conclusion like Bertinetti *et al.* (2013), and Da Silva *et al.* (2019).

CONCLUSION

Recommendations

For improving the firm value and managing ERM better in the geopolitical instability context, the following recommendations are proposed:

Recommendation for Firm Managers

(i) Managers must map out numerous alternatives and consider business risks methodically in order to develop a unique strategy for each situation in order to ensure that this step is proactive and cost-effective.

(ii) Managers should take into consideration eight elements identified in the COSO framework to build a stronger ERM system for increasing higher firm value.

(iii) To offer appropriate policies on dividend payment, it is required to strengthen regulatory capacity, adapt to risks in the highly integrated period, and consult specialists related to the business situation.

Recommendation for Policymakers

(i) In order for ERM implementation to be effective, policymakers should provide an enabling environment. In particular, policymakers should promote communication activities on ERM, organize training courses to improve risk management capacity, etc.
(ii) The effectiveness of ERM implementation in businesses is significantly influenced by external factors. Therefore, to maximize efficiency, policymakers need to watch inflation closely, develop the financial system, stabilize the geopolitical environment, and foster commercial expansion.
(iii) Supporting empirical research on the link between enterprise risk management implementation and firm value.

Conclusion

In this paper, we aim to assess the impact of ERM implementation on firm value in 345 companies in Vietnam for the period from 2018 to 2021. While most of the previous studies primarily concentrated on specific industries or used cross-sectional data, this study fills the gap by providing insight into the current state of ERM in all sectors in Vietnam through using panel data, especially under the context of geopolitical instability. Specifically, we prove that ERM has a strong positive impact on firm value with 1% statistical significance which will serve as a base for future studies on this sector in Vietnam. In addition, the impact of a variety of other factors on firm value was investigated, including *ROA*, *Firm Size*, *Total Asset Turnover*, *Financial Leverage*, *Firm Age,* and the effect of *Geographical Instability*. Accordingly, firm value increases during the geopolitical instability period because of efficient policies of the state to timely adapt to the new circumstances.

Limitations of the Study

Key limitations of this study are: First, the sample size does not cover all firms (345/741) in the stock exchange. Second, the time frame is only 4 years. Third, we do not use primary data. Finally, some ERM quality contents are not reflected in our measurement method.

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