Macroeconomic factors and firm performance – the case in the stock market

Van Chien Nguyen*



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ABSTRACT

Enterprises are an important entity in the economy and play a great role in creating jobs, carrying out production and business activities, contributing to the state budget, connecting foreign trade activities and creating development in each country. When businesses grow, it means that businesses contribute more to the national interest, therefore, countries need to create a favorable business environment to help businesses develop. Business operations are often affected by fluctuations in the macroeconomic environment in particular and government policies in general. Therefore, businesses always have to find ways to adapt to the impacts of macro factors, external shocks that may affect their business activities and from there, businesses can survive and develop. development, achieve financial benefits. The efficiency of a business is often measured by financial performance, it reflects the profit that a business can reap in business. One of the parameters that can reflect the efficiency of a business is the return on assets (ROA). The objective of the research is to evaluate the influence of macro factors on the financial performance of enterprises on the Vietnamese stock exchange in the period 2008 to 2020, using quantitative analysis method, analysis results analysis assert that: financial development has a positive effect on economic growth, which means that domestic credit poured into private enterprises often improves the financial performance. Moreover, the research results also suggest that enterprises choose to finance capital through equity, which is likely to increase the financial performance. In addition, in this research, we did not find the impact of economic growth, corporate liquidity on financial performance. It reflects that economic growth does not always bring practical effects to businesses, but economic growth needs to create qualitative changes and help businesses improve efficiency in a real way that contribute to the development of enterprises.

Key words: stock, business, performance, finance, macro

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INTRODUCTION

Enterprises play an important role in economic development in every country. Enterprises play an important role in the economy such as to produce goods and services, to create output for the economy. In addition, businesses can create jobs, contribute to national budgets, and ultimately promote economic growth. It can be said that business plays a role in almost all economic activities in all countries. ^{1,2}

In order to better represent their contribution to economic development in countries, businesses are often nurtured by the governments to help businesses grow. Enterprises should become more efficient when they have the ability to retain profits and businesses have more capital to expand production and business, thereby increasing firm value ³. Similarly, efficient enterprises are often associated with high-dividend policy which generates high profits for shareholders, and therefore the stock price may increase. In general, improving business performance in order to maximize corporate value and shareholder's benefits is the most

important goal for any business 4.

Firms operating in each country or multinational are often influenced by national policies, or broadly speaking, business performance is often affected by macroeconomic factors ^{3,4}. For example, a business operates in a volatile macro environment, meaning that the business may face greater risks that can reduce the profitability of the business. However, countries have stable macroeconomics, businesses can feel secure to do business, expand investment and seek profits.

There have been a number of studies on the influence of macro factors on the financial performance. The studies all indicate that the fluctuations of macro factors often bring negative impacts on financial performance, in contrast, a few cases indicate that the macro factors have a positive impact on financial performance ^{3–5}. In addition, internal factors in enterprises, such as capital structure choice ^{1,6}, firm size ^{1,2,7}, board characteristics ^{8–10} or other factors that also affect corporate financial performance.

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The objective of this research is to evaluate the macro factors affecting corporate financial performance in the case of Vietnam. In addition to the problem statement in part 1, the remainder of the research has four parts. Specifically, parts 2 and 3 present previous studies, data collection and research methodology. Next, the research discusses the results in part 4 and conclusions in part 5.

LITERATURE REVIEW

Research on the influence of macro factors on the financial performance has been carried out by a number of recent studies $^{1-3}$. Research suggests that the stability of macro factors plays an important role in helping businesses feel secure in their business and thereby be able to generate stable profits for businesses while minimizing the negative risks 3 .

Ullah et al. (2020) 1 studied at 90 textile enterprises in Pakistan during the period from 2008 to 2017. The authors believed that enterprises with expanding exports are more efficient. Meanwhile, Killins (2020)² emphasized that industry concentration has a negative impact on financial performance. Furthermore, economic growth and market returns have an effect on financial performance in the case of life insurance businesses in Canada. In the business process, economic policy uncertainty (EPC) has an impact on business performance. Kong et al. (2022)³ argued that economic policy uncertainty discourages investment expansion and increases business risks, thereby limiting investment efficiency. However, economic policy uncertainty has a limited impact on R&D activities but encourages green investment by firms, and generally has a negative impact on corporate financial performance. Therefore, the authors recommended that governments of other countries should actively stabilize the macroeconomic environment to help businesses optimize the investment process and improve the risk prevention mechanism.

Macro factors are often influenced by government policies with a decisive role. Zhao et al. (2022)⁵ argued that encouraging technological innovation and a win-win goal between economic development and environment, and tax policy has an impact on technological innovation and promotes economic benefits for innovative enterprises, in which R&D support policy plays an important role in technological innovation and making business operations more efficient. Furthermore, there is always a positive relationship between waste generation and firm performance. In addition, this relationship is also affected by operating costs, industry characteristics and the global financial crisis ¹¹. Further, policies can come from creating

incentives to improve corporate social responsibility, Tenuta & Cambrea (2022) ⁴ researched at the Milan stock exchange between 2013 and 2019 argued that corporate social responsibility has a positive impact on financial performance, especially with the presence of many executive members on the boards of family companies, confirming the benefits of joint leadership in the board of directors. treat.

In addition, studies also suggest that internal factors in the business also affect the profitability of the business. Ullah et al. (2020) argued that debt to equity structure has a negative impact on corporate financial performance. Nassar (2016)⁶ in the Istanbul Stock Exchange (ISE) and suggested that there is a negative relationship between debt ratio, which represents capital structure and financial performance of firms. It is shown that enterprises should give priority to choosing financing with their own capital instead of capital from debt, which has a higher level of risk and dependency. Extending the study, Ullah et al. (2020) 1 confirmed that revenue growth has a positive impact on financial performance. While, firm size has a negative effect on firm performance, that is, large firms are often less efficient than small firms. According to the authors, textile and garment enterprises often have large working capital, large-scale enterprises often have the ability to manage working capital effectively and have not yet promoted the benefits of economies of scale when compared to small businesses. Small businesses have the ability to operate flexibly in the marketplace, so they are easier to adapt in business reality. Further, factors such as firm size, liquidity, and risk also affect firm profitability². Another study on Harc (2015)⁷ affirming that large enterprises have the ability to withstand risks in their operations, demonstrating the role of large enterprises in the market. However, firm size and shortterm leverage have a positive effect but a negative effect for the relationship between firm size and longterm leverage. It shows that enterprises often prioritize long-term capital over short-term capital, because long-term capital has a higher level of safety and is often mobilized on the stock market, shareholders often have an investment commitment into the company in the long-term.

Board characteristics, Ooi & Hooy (2022) ⁹ studied at public companies in Malaysia and found that Muslim CEO has a positive impact on financial performance and risk-taking of enterprises. However, the female Muslim CEO, postgraduate degree of education have a negative effect on the relationship between risk-taking and firm performance. Furthermore, in European enterprises, Rocca et al. (2022) ¹⁰ argued

that the political connection of managers and board members affect business performance, especially in the case of individuals with a large voice in decisionmaking such as executive seniors or CEOs.

Board size has a negative impact on corporate financial performance, as mentioned by Bennedsen et al. (2008)⁸. Research on large data of 7000 enterprises confirms a strong correlation between family size and board size, and this relationship is promoted by relatives' firms of the CEO serve on the board of directors. Therefore, there exists a negative relationship between board size and financial performance. Furthermore, board characteristics and corporate internal characteristics have an impact on financial performance ¹².

DATA AND METHODOLOGY

Data

In this research, we collect 50 companies listed on the Vietnam Stock Exchange during the period from 2008 to 2020. These are companies with long enough listing period and stable business operations. determined. The data are taken from the annual audited financial statements. All variables are treated for errors and errors, which are then used in the estimation model.

Methodology

Based on previous research by Ullah et al. $(2020)^1$, we extend this study by adding some new variables, the regression equation is presented as follows: ROAit = β_0 + β_1 GDPit+ β_2 INFit + β_3 FDit + β_4 LEVit + β_5 BOARDit + β_6 LIQit + μ i + μ it In which, variables are explained in the Table 1; i and t proxy for year i and firm t, μ , μ ' is the error term; β_0 is intercept; β_i is the regression coefficient.

RESULTS AND DISCUSSIONS

Descriptive statistics

Table 2 presents descriptive statistics of the variables in the regression model. For ROA measured for financial performance, it gets an average value of 3.07%, a maximum value of 83.90% and a minimum of -28.05, which indicates a huge difference in financial performance among enterprises in the survey sample. Economic growth, inflation and financial development achieved average values of 6.09%, 7.22% and 93.42%, respectively. The average size of the board of directors is 5.14 people/company, and ranges from 3 to 9 members. Capital structure that is financed by debt with 66% while the rest that is 34%, is financed by equity. In terms of liquidity, it reached an average of 1.07, showing that the average liquidity of listed companies is not high.

Correlation matrix

Table 3 presents the correlation matrix, it found that the correlation coefficients between pairs of independent variables were less than 0.8, so there was no possibility of multicollinearity. In addition, Table 4 indicates that the mean VIF is 1.22 and less than 10, the component VIF indexes are also in the range of 1.04 and 1.47, and less than 10, so multicollinearity is unlikely to occur.

Regression results

Table 7 shows that there is a dependent relationship between enterprises on the Vietnam stock exchange, especially through the test of ROA and LIQ coefficients, it shows that there is a large dependent relationship. Specifically, businesses have a dependent relationship on liquidity and profitability. Therefore, the study should be regressed according to the Driscoll - Kraay method to properly reflect this dependency.

DISCUSSIONS

The regression results in Table 5 show that the regression according to the traditional method may have defects, so it is necessary to perform the regression according to FGLS. At the same time, because companies on the stock exchange have an interdependent relationship, the Driscoll - Kraay method should be performed regression as in the Table 6, the research results show that: inflation and development have a positive impact on financial performance while capital structure choice has a negative impact on the financial performance of the enterprise. There was no relationship between economic growth, liquidity and board size on corporate profitability.

Inflation has a positive effect on business performance, which can explain that because of the inflation factor, commodity prices often fluctuate in the direction of increasing prices, so businesses need to promote business to be able to do business in order to obtain greater benefits in the future. Moreover, high inflation is often consistent with doing the explanatory monetary policy in the context of Vietnam, and at the same time, businesses have easier access to capital and are the basis for businesses to open up or expand business in the short term. It is evident that the explanatory monetary policy have a positive impact on the financial performance of the business. In addition, enterprises should prioritize choosing equity sources to increase corporate efficiency, this is similar to the study of Ullah et al. 1, Nassar 6 once suggested that businesses should prioritize financing with their own capital instead of capital from debt with a higher level of risk and dependency.

Table 1: Description of variables used in the model

Variable	Abbre.	Previous studies
Dependent variable		
Firm performance, measured by ROA	ROA	Nassar ⁶ ; Ullah et al. ¹
Independent variable		
Economic growth	GDP	Killins ²
Inflation	INF	Hull & Alexander 13
Financial development	FD	Fafchamps & Schündeln 14
Leverage	LEV	Nassar ⁶ ; Ullah et al. ¹
Board of Directors chatacteristics	BOARD	Bennedsen et al. 8 ; Ooi & Hooy 9 ; Rocca et al. 10
Liquidity	LIQ	Killins ²

Source: Authors' compilation

Table 2: Descriptive statistics of research variables

Variable	Obs	Mean	Std.Dev	Min	Max
ROA	650	3.078845	6.288456	-28.0502	83.9056
GDP	650	6.097916	1.103095	2.94	7.2
INF	650	7.220435	6.38286	0.6312009	23.11545
FD	650	93.42904	13.15692	75.54869	116.6607
SIZE	650	5.14	0.7813899	3	9
LEV	650	0.660185	0.1681015	.1155198	1
LIQ	650	1.072757	1.365805	.01	10.95165

Source: Authors' analysis

Table 3: Correlation matrix between variables

Ī		ROA	GDP	INF	FD	BOARD	LEV	LIQ
	ROA	1.0000						
	GDP	0.0241 (0.5401)	1.0000					
	INF	0.0534 (0.1742)	-0.1304* (0.0009)	1.0000				
	FD	0.0355 (0.3943)	-0.1387* (0.0004)	-0.5204* (0.0000)	1.0000			
	BOARD	0.0697 (0.0759)	0.0036 (0.9267)	0.0335 (0.3944)	-0.0638 (0.1040)	1.0000		
	LEV	-0.4248* (0.0000)	0.0243 (0.5365)	0.0000 (0.9996)	-0.0468 (0.2333)	-0.0738 (0.0599)	1.0000	
	LIQ	0.1143* (0.0035)	0.0246 (0.5321)	-0.1047 (0.0075)	0.0576 (0.1425)	0.1899* (0.0000)	-0.2956* (0.0000)	1.0000

Note: *, significant value for 5% Source: Authors' analysis

Table 4: VIF analysis

Variable	VIF	1/VIF	
INF	1.47	0.680749	
FD	1.47	0.681749	
LIQ	1.15	0.871767	
LEV	1.10	0.908187	
GDP	1.08	0.924075	
SIZE	1.04	0.957577	
Mean VIF	1.22		

Source: Authors' analysis

Table 5: Regression results – dependent variable ROA

Variable	Regression coefficient				
	Pooled OLS	FEM	REM		
GDP	0.3295	0.3282*	0.3289*		
	(0.118)	(0.089)	(0.087)		
INF	0.0960**	0.0958**	0.0959**		
	(0.024)	(0.014)	(0.013)		
FD	0.0362*	0.0340*	0.0351*		
	(0.078)	(0.072)	(0.062)		
BOARD	0.3422	-0.1281	0.1051		
	(0.241)	(0.773)	(0.773)		
LEV	-15.8537***	-16.3314***	-16.1429***		
	(0.000)	(0.000)	(0.000)		
LIQ	-0.0672	-0.0529	-0.0563		
	(0.701)	(0.838)	(0.794)		
_Cons	5.7653*	8.6976**	7.2746**		
	(0.085)	(0.022)	(0.036)		
Test	F(6, 643) = 25.21	F(6, 594) = 11.36	Wald chi2(5) = 98.09		
	Prob > F = 0.0000	Prob > F = 0.0000	Prob > F = 0.0000		
F-test	F(49, 594) = 3.56, and Prob	F(49, 594) = 3.56, and Prob > F = 0.0000			
Hausman test	Prob > chi2 = 0.9872				
Wooldridge test for auto- correlation in panel data	F(1, 49) = 0.012; Prob > F = 0.9130				
Wald test for heteroskedas- ticity in fixed effect	Chi2(50) = 44994.04; chibar2 = 0.0000				
Breusch and Pagan multi- pliers test for random ef- fects	Chibar2(01) = 100.64; Prob > chibar2 = 0.0000				

Note: `,`*,*** at the 10%,5% 1% significance level. Pvalue value displayed in brackets "()" Source: Authors' analysis

Table 6: Regression results - robustness check

Variable	Regression coefficient		
	FGLS	Driscoll - Kraay	
GDP	0.3295 (0.115)	0.3295 (0.141)	
INF	0.0960** (0.023)	0.0960*** (0.006)	
FD	0.0362* (0.076)	0.0362* (0.247)	
BOARD	0.3422 (0.238)	0.3422 (0.167)	
LEV	-15.8537*** (0.000)	-15.8537*** (0.000)	
LIQ	-0.0672 (0.699)	-0.0672 (0.382)	
_Cons	5.7653* (0.083)	5.7653 (0.164)	
Test	F = 25.21 Prob > F = 0.0000	F = 24.98 Prob > F = 0.0000	

Note:**,*** at 5% 1% significance level. Pvalue value displayed in brackets "()" Source: Authors' analysis

Table 7: Test for cross-sectional dependence

STT	Variable	CD test	
		t-statistic	P-value
1	ROA	24.14	0.000
2	LEV	-1.29	0.196
3	LIQ	10.92	0.000

Source: Authors' analysis

CONCLUSIONS

Business enterprises are often affected by government policies, and in particular, are subject to fluctuations in macro factors. In a stable macro environment, it is to create stability in business and development for enterprises. The research assesses the impact of macro factors on business performance in enterprises listed on the Vietnam Stock Exchange in the period 2008 to 2020. The research results show that financial development has a positive impact on generating the profitability of the business. And at the same time, the choice of capital favoring debt has a negative effect or choosing a capital structure favoring equity has a positive effect on the business performance of the enterprise.

The research has several solutions. Firstly, the Government of Vietnam continues to implement solu-

tions to stabilize the macro-economy in order to create a favorable investment environment and thereby encourage enterprises to produce and invest. Secondly, Vietnam continues to develop the financial market on the basis of improving the operation of the banking system and the stock market, thereby helping enterprises to be able to mobilize capital for production and business.

CONFLICTS OF INTEREST

We have no conflits of interest to disclose

CONTRIBUTIONS

The entire content of the article is made by the author only

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Các nhân tố vĩ mô và hiệu quả doanh nghiệp – trường hợp trên thị trường chứng khoán

Nguyễn Văn Chiến*



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TÓM TẮT

Doanh nghiệp là một thực thể quan trọng trong nền kinh tế và có vai trò to lớn trong tạo việc làm, thực hiện sản xuất kinh doanh, đóng góp ngân sách nhà nước, kết nối hoạt động ngoại thương và tao ra sư phát triển tai mỗi quốc gia. Khi doanh nghiệp lớn manh đồng nghĩa với sư đóng góp của doanh nghiệp nhiều hơn vào lợi ích quốc gia, chính vì thế, các quốc gia cần tạo môi trường kinh doanh thuận lợi nhằm giúp cho doanh nghiệp phát triển. Hoạt động của doanh nghiệp thường chịu tác động bởi sự biến động của môi trường kinh tế vĩ mô nói riêng và các chính sách của chính phủ nói chung. Do đó các doanh nghiệp luôn phải tìm cách thích ứng với các tác động của nhân tố vĩ mô, các cú sốc từ bên ngoài có thể ảnh hưởng đến hoạt động kinh doanh của doanh nghiệp và từ đó doanh nghiệp có thể tồn tại và phát triển, đạt được lợi ích tài chính. Hiệu quả của doanh nghiệp thường được đo lường bằng hiệu quả tài chính, nó phản ánh lợi nhuân mà doanh nghiệp có thể gặt hái được trong kinh doanh. Một trong thông số có thể phán ánh hiệu quả của doanh nghiệp là tỷ suất sinh lời trên tổng tài sản (ROA). Mục tiêu của nghiên cứu nhằm đánh giá ảnh hưởng của nhân tố vĩ mô lên hiệu quả tài chính của doanh nghiệp trên sàn giao dịch chứng khoán Việt Nam trong giai đoạn 2008 đến 2020, sử dụng phương pháp phân tích định lượng, kết quả phân tích khẳng định rằng: phát triển tài chính có tác động tích cực lên tăng trưởng kinh tế, đồng nghĩa tín dụng nội địa được đổ vào doanh nghiệp tư nhân thường cải thiện hiệu quả hoạt động của doanh nghiệp. Hơn nữa, nghiên cứu cũng cho rằng doanh nghiệp lựa chọn tài trợ vốn qua hình thức vốn chủ sở hữu có khả năng làm gia tăng hiệu quả tài chính của doanh nghiệp. Ngoài ra, trong nghiên cứu này, chúng tôi không tìm thấy tác động của tăng trưởng kinh tế, tính thanh khoản của doanh nghiệp lên hiệu quả tài chính. Điều đó phản ánh rằng không phải lúc nào tăng trưởng kinh tế cũng mang lại hiệu quả thiết thực đối với doanh nghiệp, mà tăng trưởng kinh tế cần phải tạo ra sự biến chuyển về chất và giúp doanh nghiệp cải thiện hiệu quả một cách thực chất mới có đóng góp vào phát triển của doanh nghiệp.

Từ khoá: chứng khoán, doanh nghiệp, hiệu quả, tài chính, vĩ mô

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