DETERMINANTS OF PRICE-TO-EARNINGS RATIO OF NON-FINANCIAL COMPANIES ON HO CHI MINH STOCK EXCHANGE

PhD. Le Thanh Huyen* - PhD. Le Hai Ha* - Le Minh Phuc**

Abstract: ***Our article aims to explores factors impacting the price-to-earnings (P/E) ratio of non-financial companies on Ho Chi Minh stock exchange when the economy had experienced numerous fluctuations and there is the appearance of abnormal phenomenon such as COVID 19 outbreak. In order to achieve the study objectives, we utilize the data from 2014 to 2023 of 214 listed companies. The regression results indicate the positive influence of dividend payout ratio and the negative effect of three variables, including dividend yield, growth in sales and return in equity on P/E ratio. In addition, beside the regression analytical technique, the Blinder - Oaxaca decomposition analysis is used to study more deeply the effect of COVID 19 pandemic on P/E, and we found out the proof showing its influence. The findings of our study are meaningful to investors, managers of companies and policy makers.***

• Keywords: *price-to-earnings ratio, COVID-19, Ho Chi Minh stock exchange.*

JEL codes: G30

Date of receipt: 06th Feb., 2026
Date of delivery revision: 28th Feb., 2026
Date of receipt revision: 16th Mar., 2026
Date of approval: 27th Mar., 2026

DOI: https://doi.org/10.71374/jfar.v26.i2.69

1. Introduction

Price-to-earnings ratio always has a great attractiveness to investors, decision makers, policy makers and academics, because many people have considered it as one of the most effective measures to evaluate firm status in both internal and external aspects. In reality, that ratio contains numerous layers of meaning. On the one hand, it can demonstrate the potentials of company in maximizing the wealth of shareholders. On the other hand, it partly reflects the expectation of participants in stock market. It is clear that both these problems impact strongly the development of firm, therefore, analyzing that ratio can bring useful information. Because of great advantages of its utilization, a range of studies on determinants of P/E ratio have been implemented. However, there is not the consensus on that issue, leading to the necessity on digging deeper that problem so as to have more accurate findings.

From a practical perspective, the matter of price to earnings is also an important indicator for participants in Vietnam stock market that is still young and not yet fully developed. In fact, that 24-year-old market of Vietnam has witnessed an abundance of fluctuation since its official commencement in 2000 with continuously alternating periods of boom and stagnation. Because of the incomplete regulatory framework, some serious problems like lack of transparency, stock price manipulation occurred over long time, which have made operations of Vietnam stock market inefficient. In that situation, the deficiency in knowledge and experience of investors easily lead them to the fear of missing out (FOMO). As a result, Vietnam stock market witnessed a range of frenzied buying or panic selling periods when abnormal factors arise. That phenomenon appeared many times from 2014 to 2023. In reality, in the 10-year period, Vietnam market stock had significant changes in the number of listed companies and overall market capitalization, which reflects both potentials and vulnerability of market under the internal and external factors. This problem can be recognized by analyzing the data of firms on HOSE, because HOSE is saw as the center of the financial market where there are a lot of listed big companies in Vietnam. Between 2014 and 2021, Vietnam stock market saw a dramatic upward trend in overall market capitalization on HOSE from around 4500 thousand billion dongs to the peak of more than 7500 thousand billion dong in 2022, followed by a plummet to around 5000 thousand billion dongs in the next year, then a continuous

** Thuongmai University, Hanoi*
*** Student, Thuongmai University, Hanoi*

drop to 4500 thousand billion dongs in 2023. Those strong fluctuations came from the effect of up-and-down international economy, changes in domestic policies and especially the outbreak of COVID 19, which continuously changed the direction of cash flows and resulted in the volatility in price of stock. Similarly, the number of listed companies experienced upward trend before the slight decrease in 2023. The above data reflects that Vietnam stock market contains great potentials of booming, but it is also vulnerable because it is unmature and still lacks some basis conditions to sustainably develop. That reality has been making market participants skeptical. Additionally, the sudden emergence of COVID 19 and its effects were unpredictable, the market's reaction was also beyond many people's expectations. Instead of following the negative scenario, it becomes extremely attractive and sets the stage for a boom period from 2021 to 2022. As a consequence, it is unforeseeable volatility of market that causes the confusion of participants. In response to that obstacle, there are some reliable indexes used as important indicators for participants in the stock market. The P/E ratio is one of them. Thus, studying determinants of price-to-earning ratio is useful to many people, such as investors, managers of companies and policy makers.

2. Literature review

There have been a range of studies relating to determinants of P/E ratio.

Ramcharran (2002) investigates the determinants of the P/E ratio across 21 emerging markets using annual data from 1992-1999 and applying seemingly unrelated regression (SUR) techniques. The findings show that economic growth is consistently significant in explaining cross-country variations in P/E ratios, while credit risk has a weaker and less consistent effect.

Shamsuddin and Hillier (2004) study the determinants of the P/E multiple in the Australian stock market between 1984 and 2001. They find that P/E ratios is explained by the dividend payout ratio, interest rates, and GDP growth. In an extended model, additional variables, the results show that P/E ratios rise with higher dividend payout, stronger GDP growth, currency appreciation, and consumer confidence, but fall with higher interest rates and increased volatility.

The analysis of Nezlobin, Rajan, and Reichelstein (2013) indicates that under replacement cost accounting, the P/E ratio can be expressed as a convex combination of two classical benchmarks the permanent earnings model and the Gordon growth model with the relative weight determined entirely by Tobin's q. The study highlights that future growth opportunities in product markets increase P/E ratios, while the effect of past investment growth depends critically on the accounting regime. Under unbiased (replacement cost) accounting, higher past growth reduces P/E ratios, whereas under more conservative accounting rules (such as straight-line depreciation or expensing of intangibles), past growth can increase P/E.

Itemgenova and Sikveland (2019) examine the determinants of P/E ratio in the Norwegian aquaculture industry, with a focus on salmon farming firms listed on the Oslo Stock Exchange. Their findings reveal that return on equity (ROE) is negatively associated with the P/E ratio, reflecting the cyclical nature of profitability in the industry, while the dividend payout ratio is positively related to P/E, consistent with dividend signaling theory.

Fesokh and Haddad (2019) examine the determinants of the price-earnings (P/E) ratio in the Jordanian manufacturing sector, and indicate that Tobin's Q and leverage have a positive effect on the P/E ratio. In contrast, firm size and dividend growth are negatively associated with P/E.

Zhang (2022) conducts an empirical study on the determinants of the P/E ratio in China's media industry using quarterly data from 2000 to 2015. The study finds that dividend yield, price-to-book (P/B) ratio, return on equity (ROE), and debt-to-equity (D/E) ratio are the most significant determinants. Specifically, dividend yield shows a negative relationship with P/E, while P/B, ROE, and D/E exhibit positive effects.

3. Methodology

3.1. Hypothesis

Based on previous studies, six hypotheses are posed in this study is as follows:

H1: Dividend policies influence price to earnings ratio

H2: Growth in sales influences price to earnings ratio

H3: Return on equity influences price to earnings ratio

H4: Leverage influences price to earnings ratio

H5: Change in stock price influences price to earnings ratio

H6: COVID 19 influences price to earnings ratio

3.2. Data

In order to evaluate the influence of independent variables on the price to earnings of companies, 214 non-financial companies on HOSE are selected. For the purpose of completing research goals, dataset has to meet some requirements including: 214 selected companies must have been in business before 2014; There is no disruption in their business operation; The study is mainly based on secondary financial data including income statements, balance sheets, and cash flow statements for period of 2014 to 2023. This offered an improved understanding of the links existing among the variables.

3.4. Variables measurement

Table 1: Variables

(1) Price to earnings ratio

$$P/E = \frac{\text{Stock price per share}}{\text{Earnings per share}}$$

(2) Dividend payout ratio (DPR)

$$DPR = \frac{\text{Total dividends}}{\text{Net income}}$$

(3) Growth in sales (GS)

$$GS = \frac{(Sales_t - Sales_{t-1})}{Sales_{t-1}}$$

(4) Return on equity (ROE)

$$ROE = \frac{\text{Net income}}{\text{Average equity}}$$

(5) Leverage (LEV)

$$LEV = \frac{\text{Total debt}}{\text{Total assets}}$$

(6) Dividend yield (DY)

DY is the weighted average of the constituents' individual dividend yields, based on their market values at fiscal year-end

(7) Change in stock prices (CSP)

$$CPS = \frac{\text{Stock price}_{t-1}}{\text{Stock price}_t}$$

(8) COVID 19:

This variable is expressed by 0 and 1, 0 represents the period before The outbreak of COVID 19, and 1 represents the period after the outbreak of COVID 19

3.4. Research method

3.4.1. Empirical model of estimation

We modelled our study as follows:

$$PE_{i,t} = \beta_0 + \beta_1 DPR + \beta_2 GS_{i,t} + \beta_3 LEV_{i,t} + \beta_4 DY_{i,t} + \beta_5 ROE_{i,t} + \beta_6 CSP_{i,t} + \alpha_i + \varepsilon_{i,t}$$

Where: PE is price to earnings, GS is growth in sales, LEV is leverage, DY is dividend yield, ROE is return on equity, CSP is change in stock price and ε is error.

3.4.2. Research method

Data processing technique include calculating data analysis model is assisted by STATA version 19. Firstly, we determine the fit model (Chow test, Breusch and Pagan Lagrangian multiplier test and Hausman test are used to help us to choose appropriate model for research sample). Secondly, the Wald test and Wooldridge test are used to check the existence of heteroskedasticity and the autocorrelation problem, if there are both issues, the Cluster regression will be carried out. Finally, Oaxaca - Blinder decomposition analysis is carried out to seek the difference in P/E ratio between the 2-year period of COVID 19 outbreak and non-outbreak periods, and find causes of the difference.

4. Empirical results

4.1. Panel unit root test and multicollinearity test

From our results as presented in Table 2, it is proved that all seven variables in the model, including Price to earnings (PE), Dividend payout ratio (DPR), growth in sale (GS), Leverage (LEV), Dividend yield (DY), Return on equity (ROE), and Change in stock price (CPS) are stationary at level hence have no unit roots. Thus, we obtain all our series to be stationary as we reject the null hypotheses that the series are non-stationary.

According to the VIF results, it can be concluded that there is no multicollinearity problem in this model, thus, all variables are used for next analysis in our study.

4.2. Descriptive analysis

Table 1: Descriptive summary

Variable	Obs	Mean	Std. dev.	Min	Max	Status	VIF
PE	2,140	16.54778	20.63276	-1.24505	87.78675	Level	
DPR	2,140	0.001527	0.001588	0.0000	0.006013	Level	2.3
GS	2,140	0.019831	0.853026	-1.64234	2.305648	Level	1.16

Variable	Obs	Mean	Std. dev.	Min	Max	Status	VIF
LEV	2,140	0.455464	0.201941	0.089978	0.785946	Level	1.02
DY	2,140	0.000154	0.000138	0.0000	0.000484	Level	2.51
ROE	2,140	0.125512	0.096496	-0.0117	0.335567	Level	1.37
CSP	2,140	1.027241	0.31302	0.0000	1.69798	Level	1.16

Source: Result calculated from financial statements of companies from 2014 to 2023

As can be seen from the Table 1, the mean value of P/E ratio is 16.54778. It is a relatively high figure, shows the positive behavior of investors in the 10-year period, they appreciated that channel of investment. However, the value of standard deviation is 20.63276 because of the big gap of P/E ratio among studied companies, indicating the significant difference in their efficiency of operations. Additionally, from 2014 to 2023, there are strong fluctuations in Vietnam economy which also create the dramatic changes in both price of stock and earnings per share, eventually, P/E ratio. This problem also appears for other ratios such growth in sales, return on equity, change in price of stock.

For leverage ratio, the mean value is 0.455464 and standard deviation is 0.201941, which indicates the difference in the use of debt among companies and among periods.

In term of dividend, both dividend payout ratio and dividend yield have a rather low mean value and the difference between maximum and minimum figures is small, which shows that in the studied period, dividend policies were not seen as a key strategy of firms.

4.5. Analyzing regression results

Table 2: Regression results

FEM(Robust)						
PE	Coefficient	std. err.	t	P>t	[95% conf.	interval]
DPR	5317.627	546.7152	9.73	0.000	4239.962	6395.292
GS	-1.567379	0.4435	-3.53	0.001	-2.44159	-0.69317
LEV	2.951736	4.632741	0.64	0.525	-6.18016	12.08363
DY	-61647.25	5310.951	-11.61	0.000	-72116	-51178.5
ROE	-56.19093	7.389471	-7.6	0.000	-70.7568	-41.6251
CSP	-0.9002925	1.523775	-0.59	0.555	-3.9039	2.103317
_cons	24.62403	3.064192	8.04	0.000	18.584	30.66405

Source: Result calculated from financial statements of companies from 2014 to 2023

To know whether to use the simple ordinary least square (OLS) or fixed effect panel data regression we used the Chow test, and the results show that fixed effect is appropriate for surveyed enterprises, because the p-value (0,0000) is less than 0,05. In the next step, the result of Breusch and Pagan Lagrangian multiplier test is 0,0000, showing that random effect panel data regression is more suitable for the sample of our study than OLS. Finally, the Hausman test result indicates the use of fixed effect model is better because p-value is 0.000, lower than 0,05. On the other hand, the Wald test indicates that there is the heteroskedasticity problem in the model and Wooldridge test shows that there is the existence of autocorrelation in panel data, so robust regression is used to achieve the accuracy in regression result.

The results in Table 2 indicate that four independent variables significantly impact the price to earnings of non-financial companies in HOSE in the 10-year period from 2014 to 2023, including Dividend payout ratio (DPR), Growth in sales (GS), Dividend yield (DY) and Return on equity (ROE). Additionally, while the factor of DPR positively affects on PE, three remaining variables have negative impacts the dependent variable.

4.6. Testing the difference in the sales between food companies with ISO 22000 and others and Blinder - Oaxaca decomposition analysis

Table 3: Blinder - Oaxaca decomposition

PE	Coefficient	std. err.	z	P>z	[95% conf.	interval]
Differential						
Prediction_1	16.1677	0.491931	32.87	0.000	15.20353	17.13187
Prediction_2	18.14363	1.049229	17.29	0.000	16.08718	20.20008
Difference	-1.975928	1.158825	-1.71	0.088	-4.24718	0.295328
Explained						
DPR	1.101704	0.519755	2.12	0.034	0.083004	2.120404
GS	0.035949	0.043957	0.82	0.413	-0.05021	0.122104
LEV	-0.0205678	0.033537	-0.61	0.54	-0.0863	0.045164
DY	-2.475668	0.548846	-4.51	0.000	-3.55139	-1.39995
ROE	-0.5064757	0.293634	-1.72	0.085	-1.08199	0.069036
CSP	0.1055839	0.276877	0.38	0.703	-0.43708	0.648252
Total	-1.759475	0.659418	-2.67	0.008	-3.05191	-0.46704
Unexplained						
DPR	-0.4140207	1.469201	-0.28	0.778	-3.2936	2.465561
EG	-0.0743675	0.088508	-0.84	0.401	-0.24784	0.099105
LEV	-0.1496792	2.298006	-0.07	0.948	-4.65369	4.35433
DY	2.261292	1.320275	1.71	0.087	-0.3264	4.848983
ROE	1.765052	1.376616	1.28	0.2	-0.93307	4.46317
CSP	2.932964	3.970267	0.74	0.46	-4.84862	10.71454
_cons	-6.537693	5.46502	-1.2	0.232	-17.2489	4.173549
Total	-0.2164526	0.959549	-0.23	0.822	-2.09713	1.664229

Source: Result calculated from financial statements of companies from 2014 to 2023

In order to study the impact of the epidemic of COVID-19 on the relationship between in Price-to-earnings ratio and other variables, the decomposition analysis is implemented. Specifically, this methodology tests where there is the difference in Price-to-earnings ratio during the COVID-19 outbreak period compared to non-outbreak periods. Then, if the distinction is significance, determining

the contribution of each independent variable to that result will be indicated

This method was first built and developed by Blinder (1973) and Oaxaca (1973) with the aim of finding out why race and sex lead to wage gap between groups. Later, it was used in other research areas including corporate finance. In that analytical technique, the difference of the comparing groups is separated into two components:

(1) The first one called "explained" or "Component effect" is caused by the differences in average observable characteristics of the individuals;

(2) The second part called ""unexplained" or "Structure effect" is not the result of group differences in the predictors, it is usually attributed to discrimination.

In this study, not only is the total decomposition of the outcome differential into an explained and an unexplained part, but also the detailed contributions of the single predictors are subject to investigation.

The results reported in Table 3 show that the difference between the 2-year period of COVID-19 outbreak and the remaining periods is significant, and that distinction is mainly explained by the composition effect, of which the variable of Dividend yield contributes dramatically to the difference, followed by Dividend payout ratio and Return on equity.

5. Discussion and conclusion

By carrying an empirical research on non-financial companies on HOSE, we have some following conclusions:

Firstly, all two variables relating to dividend significantly impact P/E ratio of listed companies in the studied period. However, while the increase in dividend payout ratio (DPR) can lead to the rise in PE, the influence of dividend yield (DY) is negative. These results indicate that investors are really attracted to dividend policies of companies. When companies spend more after-tax profit on dividend, the interest of participants in market could be improved. That impact could be used by corporate finance management when a firm wants to raise capital through issuing new stocks. Nonetheless, if the amount of dividend is rather high compared with the price, investor sentiment tends to be negative, because they think the potentials of that stock is decreasing. Thus, giving decisions on dividend policies need to be carefully considered, and some problems should be taken into account, such as financial status, firm position, the trend of market development.

Secondly, return on equity (ROE) and growth in sales (GS) negatively affect the P/E ratio of listed companies. The reason of this phenomenon comes from the fact that when ROE and GS rise, earnings per share also climb. However, not all investors have immediate access to that information, which may lead to a slower increase in the stock price, eventually a reduce in P/E ratio. That result shows that the problem of asymmetric information dramatically impacts the efficiency of stock market, and policy makers should impose stricter and more severe regulations on the publication of information of listed companies in order to gradually eliminate the influence of asymmetric information and make stock market more attracting to investors.

Thirdly, when COVID 19 outbroke, investors behavior in the financial market changed. The proof is that P/E ratio in epidemic period is drastically different from that in non-outbreak periods, and that difference is partly contributed by dividend policies and ROE of companies. This finding is meaningful to managers and decision-makers when they must cope with abnormal circumstances that suddenly arise. It can help them have effective strategies to adapt to new situations and maintain good earning per shares and price of stock.

In conclusion, Price-to-earnings ratio plays an important role in evaluating the business operations. That figure contains numerous layers of meaning, and that makes it increasingly meaningful is its capacity of reflecting the expectation of participants in stock market. Therefore, findings of this article can bring benefits for many people, including investors, managers and policy makers.

References:

Chua, A., DeLisle, R. J., Feng, S. S. and Lee, B. S. (2015), "Price-to-earnings ratios and option prices", Journal of Future Markets, Vol. 35, pp. 738-752.

Fesokh, A. A., & Haddad, F. S. (2019). Determinants of price earnings ratio in manufacturing industry in Jordan. Jordan Journal of Business Administration, 15(2), 227-247.

Itemgenova, A., & Sikveland, M. (2019). The determinants of the price-earnings ratio in the Norwegian aquaculture industry. Master's thesis, Norwegian School of Economics (NHH).

Jitmaneeroj, B. (2015), "The impact of dividend payout policy on the price-earnings ratio: The role of conditional and nonlinear relationship", Working paper, University of The Thai Chamber of Commerce, 10 Jan 2015.

Ramcharran, H. (2002), "An empirical analysis of the determinants of the P/E ratio in emerging markets", Emerging Market Review, Vol. 3, pp. 165-178.

Shamsuddin, A. F. M., & Hillier, J. R. (2004). Fundamental determinants of the Australian price-earnings multiple. Pacific-Basin Finance Journal, 12(5), 565-576.

Zhang, J. (2022). Determinants of price-earnings ratios in China's media industry. Journal of Applied Finance & Banking, 12(1), 1-20.