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MARKET MICROSTRUCTURE THEORY: FIXED EFFECT MODEL APPROACH ON COMPANY FUNDAMENTALS PROFITABILITY

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Abstract

The concept of market microstructure, or market microstructure theory, examines the dynamics behind the formation of stock prices in Indonesia. There are three primary categories that may be used to categorize the many explanations offered by academics and researchers on the processes that lead to the establishment of stock prices on the Exchange. In this work, a quantitative methodology is utilized to evaluate hypotheses, and confirm market microstructure theory, and signal theory. This research makes use of secondary data, namely information gleaned from the Indonesia Stock Exchange for the years 2017-2020. The data in question cover the period of time. The State-Owned Enterprises (BUMN) group, of which the research sample is a member, provides the sample for this study. The findings of the study indicate that there is a connection between fundamentals and profitability.
Keywords : Market Microstructure Theory, Fundamentals, Profitability

INTRODUCTION

In market microstructure theory, stock prices are determined by the supply and demand dynamics of market participants responding to various types of information. Amir (2022) describes the market microstructure as consisting of two primary elements: dealers and auctions, focusing on aspects such as retailer pricing, transaction volumes, and the behaviors influencing transaction outcomes under different market conditions. Complete financial transparency in capital markets greatly benefits analysts and investors. Katmon et al. (2017) argue that management of performance, rather than executive management, more significantly degrades the quality of information disclosure. The decline in disclosure quality affects the performance management more severely than it does executive management. As a result, the inadequate disclosure compels investors to seek information from external sources, as noted by Asay et al. (2017). Investors respond to stock price fluctuations based on factors like disclosure, profitability, liquidity, and efficiency, as identified by Rahman & Liu (2021). Lerman & Tan (2019) observed that investor reactions increase with stock transactions that involve the quality and quantity of positive versus negative information. Furthermore, Liu et al. (2021) found that poor investor responses to essential metrics like company profitability, asset growth, and financial disturbances are linked to underinvestment. Hapsoro & Husain (2019) suggest that despite sustainability reporting covering financial, social, and environmental responsibilities of companies, metrics like debt-equity ratio (DER) and earnings per share (EPS) do not significantly influence investor behavior.

Wang (1994) outlines that informed and uninformed investors behave differently, especially under conditions of information asymmetry where uninformed investors face greater uncertainty. This lack of information leads to less aggressive trading behaviors, even among educated investors who lack effective trading strategies. Uninformed investors are also noted for their more cautious approach to trading, especially in anticipation of future dividends, which contrasts with the more aggressive trading seen when investors are well-informed. Caldentey & Stacchetti (2010) found that insiders often gradually release information to the market, engaging in significant transactions once this information fully reflects in the stock prices. This strategy allows insiders to maximize profits over time. Collin-Dufresne & Fos (2016) further note that insiders prefer to wait for moments when trading volumes are high to engage in more aggressive trades. This body of research enhances the understanding of market microstructure theory, particularly in its crucial role in determining market prices. Practically, these insights can aid retail investors in understanding fundamental market dynamics and assist in the formulation of regulatory strategies for markets like the Indonesian stock market, helping to improve transparency and trading fairness.

LITERATURE REVIEW

Market Microstructure Theory is a branch of finance that studies the processes, outcomes, and implications of trading securities, focusing on the detailed mechanics of how trades are executed and the consequent price formation. The theory delves into the roles of various market participants, the structure of trading systems, and the strategic behavior of traders Lescourret (2022). Supporting this, Lepone & Wong (2017) find evidence of virtual market makers playing a significant role in price discovery, further indicating how micro-market structures can influence market behavior.

Signaling theory, initially introduced by Spence in 1973, addresses employers' uncertainties regarding the abilities of potential employees in the job market. Since hiring involves training costs without guaranteed returns, employers look at indicators such as education, work experience, race, and gender to mitigate risk. These individual traits serve as signals to employers about the worthiness of investment in training.

In capital market research, signaling theory is extensively applied to understand how the release of accounting information influences investor decision-making. Myers (1989) explored this theory, finding that operational and investment cash flows serve as key indicators for investors to forecast future returns. Similarly, a study by Prihatni et al. (2016) demonstrated that in international finance, information on income, book value, and cash flows is crucial.

Barth (2018) indicated that information on current wealth assists investors in reducing the risks and uncertainties associated with future investments. In capital market research, signaling theory is commonly employed to understand how disclosure impacts investor decision-making. Myers (1989) demonstrated that operational and investment cash flows are key indicators for investors to anticipate future returns. Further research by Prihatni et al. (2016) found that income, book value, and cash flow information are especially significant in international finance.

Although Hail's 2013 study noted a decline in the importance of accounting information, Putri (2020) identified a negative impact of leveraged capital structures on profitability, suggesting that debt-financed growth could reduce profitability. However, Chandra et al. (2019) and Ajmera (2019) presented mixed findings; the former suggested that debt could enhance profitability due to tax benefits, whereas Ajmera found no significant impact of debt ratios on profitability.

Meanwhile,Ningrum et al. (2021) and Putri (2020) suggested that a company's financial performance and profitability significantly influence its market valuation. Hail (2013) found a diminishing importance of financial statements over time, possibly due to evolving economic environments and the need for updated accounting standards. These changes reflect shifts in international regulatory requirements, the move towards fair value accounting, and reactions to financial scandals and market crises.

RESEARCH METHOD

The approach used in this study to test hypotheses and validate market microstructure theory and signal theory is a quantitative approach.

Data and Data Sources

In this study, the data source was taken from some companies such as ASTRA, LIPPO, PANIN, SALIM, and Sinar Mas for the 2017-2020 period. The sample in this study was determined based on the capitalization value of the 6 groups. Sample capitalization value ± Rp. 2,486 trillion or ±45.7%, so that events that occur in the sample group can reflect the conditions of the Indonesian Stock Exchange.

Research Model

This research model uses the following multiple regression equations;

$Y = \alpha + \beta X1 + \beta X2 + \beta X3 + \beta X4 + \beta X5 + e$

Where;

Y = Profitability (EPS)

X1= BV

X2= DER

X3= PER

X4= ROA

X5= Size

α = constant

β = coefficients X1 and X2

e = errors

RESULTS AND DISCUSSIONS

The Decision of Panel Data Estimation Model

The results of the Chow test indicate that the P-value is less than 0.05, which means that the hypothesis may be accepted. Consequently, the Fixed Effect (FE) model is the one that should be utilized while doing panel data regression. The next step is to use the Hausman test to compare the Fixed Effect (FE) model against the Random Effect (RE) model. If the Chow test for the Fixed Effect model turns out to be more accurate, then the Hausman test will be performed; nevertheless, the purpose of this test is to decide whether or not to employ Random Effects. The hypotheses are as follows:

H0: Model Random Effects

H1: Model Fixed Effects

The results of the Hausman test suggest that the p-value (prob>chi2) is less than 0.05; hence, the Fixed Effect model is more accurate in terms of prediction than the Random Effect model. As a result, Hypothesis 0 (H0) is disqualified, and Hypothesis 1 (H1) is selected (FE).

Dependent Variable: PROFITABILITAS
Method: Panel Least Squares
Date: 09/11/22 Time: 17:24
Sample: 2017 2020
Periods included: 4
Cross-sections included: 4
Total panel (balanced) observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27.16375	9.382280	2.895219	0.0231
BV	4.832779	4.765082	1.014207	0.0003
DER	1.450292	1.287789	-1.126189	0.0043
PER	0.172006	2.059679	0.083511	0.0121
ROA	1.667912	1.133317	-1.470615	0.0018
SIZE	2.346421	1.179687	-0.293649	0.0217

Effects Specification

Period fixed (dummy variables)

R-squared	0.589370	Mean dependent var	14.43961
Adjusted R-squared	0.120078	S.D. dependent var	21.27982
S.E. of regression	19.96136	Akaike info criterion	9.123795
Sum squared resid	2789.191	Schwarz criterion	9.558376
Log likelihood	-63.99036	Hannan-Quinn criter.	9.146049
F-statistic	1.255870	Durbin-Watson stat	3.165130
Prob(F-statistic)	0.388401		

Source: Output Results (2022)

Effect of Firm Value on Company Profitability

The results of this study show that company value (BV) has a substantial positive influence on firm profitability (EPS) with a coefficient value of 4.83 and a p-value that ranges from 0.0003 to 0.05. The value of the coefficient indicates that this effect is statistically significant. This research shows that firm value is an important signal for investors before investing. The lower the company value (BV) compared to the market price, the more profitable investors perceive the company's value. However, investors may perceive a high company value (BV) as a company that is well-managed by management. One of them is reflected in the distribution of dividends by the company's management. This study also supports the signaling theory, in which firm value is an important signal for investors about the state of company profitability. According to the findings of a study conducted by Dang et al. (2020), the worth of a firm may be determined by the level of quality reflected in its earnings. This also means that high profitability increases shareholder value. This research is supported by the results of Putri's research (2020) which states that a company's profitability has an effect on its value. This indicates that investors will have a stronger perception of the worth of a firm and will make more value-oriented investment decisions when the company's profitability is higher. Fixed values can also be an indicator of financial difficulties when facing investment uncertainty in the future (ElBannan, 2021).

This study shows that the results of the theory of micro market structure and the effect of firm value on firm profitability support the signaling theory. Investors place a significant amount of weight on investors receiving fixed income as an indication regarding to the health of the company's profitability. The findings of this investigation lend credence to the findings of Dang et al (2020), where the company's value is reflected in the high and low quality of the company's performance. In other words, companies with high profitability increase shareholder value. This research also strengthens Putri's research (2020) that company value affects profitability. This indicates that investors will have a more favorable perception of the value of the firm as well as judgments regarding value investments when the profitability of the company is higher.

The leverage variable has a negative effect on company profitability and does not support the hypothesis. On the other hand, the findings of this study provide credence to the signaling hypothesis, which postulates that leverage might serve as a proxy for a company's success. The results of this study also support Ajmera's research (2019) that leverage ratios do not affect company profitability, but can increase company profitability (Chandra et al., 2019).

The results of the PER variable show that there is a negative influence on company profitability, the researchers suspect because asset growth and future profitability are less developed. (Thornblad et al., (2018) and (Liu et al., 2021). Studies by Thornblad et al., (2018) and (Liu et al., 2021) conclude that due to increases, investors may be less responsive to fundamentals in ROA of Assets: The relationship between n and firm size (Size) provides one of the signals to investors when evaluating their investment Predictions of the future The study by Liu et al (2021) tested the effect of the variable firm size on abnormal returns**.**

CONCLUSION

This study reinforces the micro market structure theory and confirms the signaling theory's assertion that firm value influences profitability. According to Dang et al. (2020), a firm's value can be inferred from both its high and low performance quality, suggesting that companies with higher profitability enhance shareholder value. This aligns with Putri's (2020) findings that company value positively impacts profitability, indicating that investors tend to have a more favorable view of a firm's value and make more confident investment decisions when the company's profitability is higher. The study also explores the impact of leverage on company profitability and finds that it has a negative effect, contradicting some hypotheses but supporting the signaling theory's view that leverage can provide insights into a company's performance. This is in line with Ajmera's (2019) conclusion that leverage ratios do not directly impact company profitability, although Chandra et al. (2019) suggest it can potentially enhance it. Regarding the price-earnings ratio (PER), the study observes a negative impact on company profitability, which researchers attribute to underdeveloped asset growth and future profitability prospects, as noted by Thornblad et al. (2018) and Liu et al. (2021). These studies highlight that rising asset valuations might lead investors to pay less attention to fundamental financial metrics like Return on Assets (ROA), affecting how they evaluate investment opportunities. Additionally, Liu et al. (2021) examined the role of firm size in predicting abnormal returns, suggesting that the size of a firm provides crucial signals to investors about future profitability.

REFERENCES

Agustin Dyah Utami, R. A. T. (2011). Pemanfaatan Blackberry Sebagai Sarana Ajmera, B. (2019). An Empirical Study on Effect of Capital Structure on Financial Performance of Paper Manufacturing Companies in India : Penal Data Analysis. 9(3), 18–25.

Allen, F., & Gorton, G. (1993). Churning bubbles. The Review of Economic Studies, 60(4), 813-836.

Asay, H. S., Elliott, W. B., & Rennekamp, K. (2017). Disclosure Readability and the Sensitivity of Investors' Valuation Judgments to Outside Information. The Accounting Review, 92(4), 1–25.

Barth, M. E. (2018). The future of financial reporting: Insights from research. Abacus, 54(1), 66-78.

Caldentey, R., & Stacchetti, E. (2010). Insider trading with a random deadline. Econometrica, 78(1), 245-283.

Chandra, T., Junaedi, A. T., Wijaya, E., Suharti, S., Mimelientesa, I., & Ng, M. (2019). The effect of capital structure on profitability and stock returns: Empirical analysis of firms listed in Kompas 100. Journal of Chinese Economic and Foreign Trade Studies.

Collin-Dufresne, P., & Fos, V. (2016). Insider Trading, Stochastic Liquidity, and Equilibrium Prices. Econometrica, 84(4), 1441–1475

Dang, T. V., Gorton, G., & Holmström, B. (2020). The information view of financial crises. Annual Review of Financial Economics, 12, 39-65.

ElBannan, M. A. (2021). On the prediction of financial distress in emerging markets: What matters more? Empirical evidence from Arab spring countries. Emerging Markets Review, 47, 100806.

Francis, J., & Schipper, K. (1999). Have financial statements lost their relevance?. Journal of accounting Research, 37(2), 319-352.

Hail, L. (2013). Financial reporting and firm valuation: relevance lost or relevance regained?. Accounting and Business Research, 43(4), 329-358.

Hapsoro, D., & Husain, Z. F. (2019). Does sustainability report moderate the effect of financial performance on investor reaction? Evidence of Indonesian listed firms. International Journal of Business, 24(3), 308-328.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. Journal of accounting and economics, 31(1-3), 405-440.

Hidayah, Arifatul (2021). Pengaruh Rasio Keuangan Terhadap Keputusan Investasi Pada Saham. Artikel Ilmiah

Lepone, A., & Wong, J. B. (2017). Pseudo market-makers, market quality and the minimum tick size. International Review of Economics & Finance, 47, 88-100.

Lepone, A., & Wong, J. B. (2017). Pseudo market-makers, market quality and the minimum tick size. International Review of Economics & Finance, 47, 88-100.

Lescourret, L., & Moinas, S. (2022). Market Microstructure in Practice. Journal of Quantitative Finance. https://doi.org/10.1080/14697688.2022.2080103[18].

Liu, Z., Huang, D., Huang, K., Li, Z., & Zhao, J. (2021, January). Finbert: A pre-trained financial language representation model for financial text mining. In Proceedings of the Twenty-Ninth International Conference on International Joint Conferences on Artificial Intelligence (pp. 4513-4519).

Lobo, G.J., Zhou, J.J. (2001), Disclosure quality And earnings management. Asia-Pacific Journal of Accounting and Economics, 8(1), 1-20.

Myers, S. C. (1989). Still searching for optimal capital structure. Are the distinctions between debt and equity disappearing, 80-95.

Ningrum, A. S., & Mahardika, D. P. K. (2021). Analisis Determinan Net Initial Return pada Perusahaan yang Melakukan IPO di Bursa Efek Indonesia. Jurnal Ilmiah Wahana Akuntansi, 16(1), 94-110.

Katmon, N., & Farooque, O. A. (2017). Exploring the impact of internal corporate governance on the relation between disclosure quality and earnings management in the UK listed companies. Journal of Business Ethics, 142(2), 345-367.

Prihatini, A. E., & Purbawati, D. (2021). Analisis kesehatan Keuangan dengan Menggunakan Metode Altman Z-Score Pada PT Tiga Pilar Sejahtera Food Tbk. Jurnal Administrasi Bisnis, 10(2), 155-164.

Putri, I. G. A. P. T. (2020). Effect of capital structure and sales growth on firm value with profitability as mediation. International Research Journal of Management, IT and Social Sciences, 145–155.

Putri, I. G. A. P. T., & Rahyuda, H. (2020). Effect of capital structure and sales growth on firm value with profitability as mediation. International Research Journal of Management, IT and Social Sciences, 7(1), 145–155.

Rahman, J., & Liu, R. (2021). Value relevance of accounting information and stock price reaction:

Empirical evidence from China. Journal of Accounting and Management Information Systems, 20(1/2021), 5–27.

Rita, Dhyanasaridewi, I Gusti Ayu Diah; Saputor, Fikri Adi (2021). Analisa Rasio Keuangan Dalam Menentukan Keputusan Investasi. Jurnal Remittance, 02(02), 10-15

Penman, S. H. (1991). An evaluation of accounting rate-of-return. Journal of Accounting, Auditing & Finance, 6(2), 233-255.

Spence, A.M. (1974). Market signaling: Information transfer in hiring and related processes. Cambridge, MA:

Thornblad, D. B., Zeitzmann, H. K., & Carlson, K. D. (2018). Negative denominators in index variables: The vulnerability of return on equity, debt to equity, and other ratios. Electronic Journal of Business Research Methods, 16(1), 1-10. Harvard University Press