IConEnt

The 4th International Conference on Entrepreneurship

DOES MANAGERIAL ABILITY HAVE INFORMATION CONTENT FOR CAPITAL MARKET PLAYERS? AN EMPIRICAL STUDY IN INDONESIA

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ABSTRACT

This study empirically tests the effect of managerial ability on market reaction. Managerial ability is measured using the Demerjian et al. (2012) model, while market reaction is measured using the earnings response coefficient (ERC). The study observations include samples from all public companies on the IDX listed from 2017 to 2021 with a final number of observations of 1,380 in firm-years, except for the financial sector. By using the non-probability sampling method and purposive sampling technique, and the linear multiple regression estimation model, this study found no evidence that managerial ability can be detected by the market. Our additional testing using a measure of highest level of managerial ability also found no evidence that the market can capture the information content measured by the ERC from the highest level of managerial ability. Further test also found no evidence that during the crisis period due to the COVID-19 pandemic there is no incremental information from the existence of managerial ability captured by the capital market players. The results of this study are robust considering the results of sensitivity and additional tests.

Keywords - **earnings response coefficient, information content, Indonesia, managerial ability, market reaction**

INTRODUCTION

In this era of globalization, competition in the business environment is becoming increasingly competitive. The right strategy is needed for companies to face risks that will affect the sustainability of the company. Therefore, companies need management as company managers who have high capabilities. Demerjian et al. (2013) explained that managerial ability includes the ability of managers to make and implement decisions that can bring the company to a high level of efficiency. Efficiency refers to the minimum use of resources to achieve optimal results. Efficiency means the existence of management decisions to achieve company goals using optimal methods. A company can be said to be efficient if it can produce outcomes, such as maximum profit with minimum utilization of operations and resources.

Managerial ability is important because Hambrick and Mason (1984) suggest that organizations, such as strategic decision making and performance levels are related to managerial characteristics. Based on this idea, a growing stream of research in economics, finance, and accounting has found that managerial fixed effects explain variations in corporate investment, finance, and accounting policies.

How important is the quality of the chief executive officer (CEO) to the company's shareholders? The importance of managerial ability for companies has been a common topic in business in recent years, but has not been studied extensively. How important is the ability of managers in managing the company also important to the market? Non-financial information other than profit and financial information conveyed by managers to the market is believed to have information content in it and can influence the market in making investment decisions. Previous studies, for example, found that the profit conveyed to the market, where the profit contains earnings management, gives a market reaction (Kustono et al., 2021; Purwaningsih & Kusuma, 2020).

Hayes & Schaefer (1999) found that the loss of highly capable managers can be associated with negative abnormal returns. Market reaction can be proxied by the earnings response coefficient (ERC) which uses abnormal returns in its calculation. It can be concluded that

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managerial ability affects abnormal returns which then affects market reaction. Empirical evidence finds that managerial ability is related to earnings quality, audit risk, credit rating, insider trading, litigation risk, investment opportunities, and tax avoidance (Bonsall et al., 2017; Cornaggia et al., 2017; Demerjian et al., 2013, 2017; Hakim et al., 2022; Krishnan et al., 2021; Lee et al., 2018; Luo & Zhou, 2017; Wang, 2013).

A recent study found that managerial ability provides market reaction in Korea (Kim et al., 2022). Based on this study, managerial ability is an important determinant of market response and that the information environment explains their relationship. However, their study has not controlled for the COVID-19 pandemic, which can affect the market response to the information content of earnings while their observation period is within the range of the COVID-19 pandemic which can affect market reaction.

The motivation of this study is to test the market reaction as measured by the earnings response coefficient to non-financial information in the form of high ability managers. Can the market capture the information content contained in managerial ability? Several reasons why this study is important. First, because the non-financial information contained in managerial ability should be able to distinguish which companies are superior compared to other companies in their respective industries. Companies with high ability managers have the ability to manage company resources so that entities have a comparative advantage compared to their competitors. Second, this study is important because the observation period of the study, namely 2018-2021, covers the financial crisis period caused by the COVID-19 pandemic, where the role of the CEO and CFO as high ability managers to overcome financial difficulties in the midst of the pandemic crisis is very much needed by the entity, but can the market capture this information content.

The next discussion in this study includes a literature review and hypothesis development, research methods, results and discussions, as well as conclusions and suggestions.

LITERATURE STUDY AND HYPOTHESIS DEVELOPMENT

A. Signaling Theory

Jensen & Meckling (1976) stated that one effort to reduce agency conflict is to monitor manager behavior (agent behavior). There are two things that can be used to align the interests of shareholders and agents; first, adopting audit functions and mechanisms in corporate governance. Second, providing incentives for management that can act in accordance with the interests of the owners (Falendro et al., 2018).

In terms of managerial ability, if it turns out that there is no market reaction to managerial ability, then it is likely that the market cannot measure managerial ability or because the market does not consider managerial ability to be important. And this can be an agency problem. If the market cannot measure managerial ability, it is likely due to information asymmetry, or the market does not prioritize the quality of managers because of differences in interests between shareholders and managers.

B. Positive Accounting Theory

Ball & Brown (1968) and Beaver (1968) adopted the assumption that accounting numbers contain information for investment decisions in the securities market and used this information perspective to investigate the relationship between accounting numbers and stock prices. Positive accounting theory by Watts & Zimmerman (1990) states that the purpose of accounting theory is to explain observable accounting practices and predict unobservable phenomena, and to connect concepts in the form of hypotheses to be tested. The basic concept of earnings response coefficient (ERC) is rooted in positive accounting theory. ERC is used primarily in research in accounting and finance. In particular, ERC has been used in positive accounting research in the financial accounting research branch, because it theoretically describes how markets react to different information events.

C. Signal Theory

According to Taj (2016), the key elements of signaling theory consist of signalers, signals, and receivers. Signalers are insiders, such as management or executives, who obtain information about individuals, organizations, or products, which are not recognized by outsiders. Signals are information signals sent by one party to another to influence the desired outcome. After obtaining private information (positive or negative), insiders decide whether or not to communicate it to outsiders. Usually, the main goal of "insiders" is to send positive signals to outsiders and avoid sending negative information intentionally to reduce information asymmetry, which helps companies achieve their ultimate goal of positively influencing desired outcomes, for example, young company leaders in initial public offerings (IPOs) appoint a diverse group of prestigious directors to send a message to potential investors about the legitimacy of the company.

D. Managerial Ability

Demerjian et al. (2012) define managerial ability as the efficiency of management relative to the company's industry, in converting company resources into income. According to the study, more and more managers have more abilities, for example in understanding technology and industry, predicting product demand more reliably, investing in higher-value projects, and managing employees more efficiently.

Wati et al. (2020) define managerial ability as management characteristics such as talent, quality, ability, and reputation of management, where these actions affect corporate decision making. Previous research by Bertrand and Schoar (2003) showed that specific features of managers (ability, talent, reputation, or style) affect economic outcomes.

As agents, managers must have the skills to be able to manage the company well. Some explanations about capable managers include: (i) A capable manager is a manager who has extensive knowledge of the company's business, so that he is able to make better judgments and estimates (Demerjian et al., 2013); (ii) A capable manager generates high returns through profitable investment opportunities (Wati et al., 2020); (ii) A capable manager is able to create value from the use of resources controlled by the company (Holcomb et al., 2009).

E. Hypothesis Development

A company with managerial ability is expected to be able to increase the company's efficiency, which then increases the company's profit. Luo & Zhou's (2017) study found that managerial ability has a positive effect on earnings management and earnings announcements. Positive earnings announcements then give a positive reaction to market reactions. This is because investors give more weight to positive earnings announcements expressed by more reliable management teams.

Hakim et al. (2022) found that earnings management practices revealed in companies are mainly determined by the role of management with the aim of providing the best performance report for shareholders. Their study states that increasing managerial ability will increase earnings management practices. Meanwhile, Purwaningsih and Kusuma (2020) found that real earnings management (REM) has a positive effect on ERC. Thus, it can be concluded that managerial ability affects earnings management, where earnings management will then affect ERC.

Demerjian et al. (2017) found a relationship between managerial ability and intentional smoothing - which is part of earnings management. They found that highly capable managers do intentional smoothing more often. Intentional smoothing improves the company's earnings performance, especially if it is more profitable for shareholders, not just for personal gain. Kustono et al. (2021) found that income smoothing has a positive effect on earnings quality. The implications of this study indicate that investors assess the quality of a company's earnings for their investment decisions. Thus, it can be concluded deductively that managerial ability gives a positive reaction to the market through ERC because managerial ability has a positive effect on

income smoothing, and income smoothing will improve the quality of earnings that can be proxied by ERC.

It can be concluded that managerial ability does what is good for the manager himself and also the shareholders, so managers with high ability should give a positive reaction from the market. However, if not, there is a possibility of an agency problem that causes information asymmetry. Thus, the research hypothesis to be tested is stated as follows:

H1: Ceteris paribus, the market reacts positively to managerial ability

RESEARCH METHOD

1. Research Population and Sample

The population of this study is all companies listed on the Indonesia Stock Exchange (IDX) other than companies in the financial industry with an observation period of 2018-2021. This study uses a non-probability sampling method with a purposive sampling technique. The criteria are as follows: (i) the company has been listed on the IDX since 2017; (ii) the company is active at least until 2021; (iii) the company's financial statements are available for 2017-2021; (iv) the company has not received any IDX sanctions from April 1, 2018 to March 31, 2022; and (v) the financial statements use Rupiah currency. Based on the above criteria, the final sample and observations were obtained as many as 332 companies and 1,308 observations in firm-years, respectively. Table 1 presents a description of the sample selection.

TABLE 1
SAMPLE SELECTION

Description	Total
All listed firms on the IDX at 2021	769
Less:	
Firms in the financial industries	(97)
Companies with incomplete financial data	(56)
Companies with the presentation of their financial statements using other foreign currencies other than IDR	(79)
Number of new listing companies from 2018-2021	(205)
Firm suspended in the capital market during 2018-2021	(2)
Total sample in firms	332
Total observations in firm-years	1,328
Numbeer of data cannot be used in the variable computation	(20)
Total final observations in firm-years	1,308

Source: IDX website and S&P Capital IQ

2. Empirical Model

To test the first hypothesis (H1), this study uses the following empirical model:

$$CAR_{it} = \alpha_0 + \alpha_1 UE_{it} + \alpha_2 UE*MA_{it} + \alpha_3 UE*SIZE_{it} + \alpha_4 UE*LEV_{it} + \alpha_5 UE*BIG4_{it} + \alpha_6 UE*SGR_i + \alpha_7 UE*LOSS_{it} + \alpha_8 UE*COV_{it} + \beta_9 UE*FIDI_{it} + \beta_{10} UE*OCF_{it} + \beta_{11} UE*MB_{it} + \alpha_{12} MA_{it} + \alpha_{13} SIZE_{it} + \alpha_{14} LEV_{it} + \alpha_{15} BIG4_{it} + \alpha_{16} SGR_{it} + \alpha_{17} LOSS_{it} + \alpha_{18} COV_{it} + \alpha_{19} FIDI_{it} + \alpha_{20} OCF_{it} + \alpha_{21} MB_{it} + \varepsilon_{it} \quad (1)$$

Based on Model 1, the coefficient α2 is the earnings response coefficient (ERC) of the main variable UE*MA. The coefficient α2 is predicted to be significant and positive, indicating that the market reacts positively to information from managerial ability. This provides the desired expectation that managerial ability is an important aspect in making investment decisions. Please refer to Appendix 1 for all variable definitions in Model 1.

In Model 1, there are several control variables that influence the earnings response coefficient (ERC) according to previous studies. In this study, the control variables include SIZE (company

size), LEV (leverage), BIG4 (Big Four), SGR (sales growth), LOSS, COV (COVID-19), FIDI (Financial Distress), OCF (Operating Cash Flows), and MB (Market to Book). The SIZE coefficient is predicted to be negative because the larger the size of a company, the more information is available compared to smaller companies, so the market reaction becomes smaller (Balsam et al., 2003; Dewi & Herusetya, 2015; Hackenbrack & Hogan, 2002).

The LEV coefficient is predicted to be negative because the higher the level of debt, the higher the risk for investors, so it has a lower ERC (Dewi & Herusetya, 2015; Scott & O'Brien, 2020). The BIG4 coefficient is predicted to be positive because the audit quality of the Big Four is considered to have higher audit quality, so the market reacts positively compared to clients audited by non-Big Four (Balsam et al., 2003; Dewi & Herusetya, 2015).

SGR is predicted to be positive because companies with high growth rates have higher ERCs than companies with lower growth rates (Scott & O'Brien, 2020).

LOSS is predicted to be negative because companies that experience losses have lower ERCs (Balsam et al., 2003; Dechow et al., 2010; Dewi & Herusetya, 2015; Hackenbrack & Hogan, 2002). The COV coefficient is predicted to be negative because the company's ERC is lower than before the pandemic (Xiong et al., 2020). The FIDI coefficient is predicted to be negative because companies experiencing financial distress are more likely to lose their market share (Immanuel & Prabowo, 2021; Wu et al., 2020).

OCF is predicted to be negative (Balsam et al., 2003; Becker et al., 1998). The MB coefficient is predicted to be positive because the higher the ratio of market to book value of equity, the higher the earnings growth expected by the market (Balsam et al., 2003; Collins & Kothari, 1989; Hackenbrack & Hogan, 2002). Based on the arguments above, the interaction coefficients of UE*SIZE, UE*LEV, UE*LOSS, UE*COV, UE*FIDI, and UE*OCF are predicted to be negative, while the interaction coefficients of UE*BIG4, UE*SGR, and UE*MB are predicted to be positive.

3. Earnings Response Coefficient (ERC)

ERC is a market reaction reflected in the δ (delta) coefficient of the unexpected earnings (UE) variable (Dewi & Herusetya, 2015; Suwarno et al., 2017; Widiatmoko & Indarti, 2018), which is stated in the basic ERC model as follows:

$CAR_{it} = \alpha + \delta UE_{it} + \varepsilon_{it}$ (2)

Where:

CAR : Cumulative abnormal return
UE : Unexpected earnings
α : Coefficient
δ : Earnings Response Coefficient
ε : errors

ERC shows the extent to which the market reacts to the information content of earnings delivered by the company. If statistically not equal to zero, it means that earnings contain useful information for investors in decision making. CAR is a dependent variable, and is calculated using the accumulation of the company's abnormal returns that have been adjusted for the market's abnormal returns. Therefore, CAR is the total of abnormal returns for 12 months used to capture the information content of stock prices, starting on April 1 of the year t and ending three months after the end of the fiscal year (t+1) (Dewi & Herusetya, 2015). Monthly abnormal returns are calculated from the difference between the company's stock returns (Rit) and market returns (Rmt) with the following formula:

$\mathrm{ARit} = \mathrm{Rit} - \mathrm{Rmt}$; where:

$$\mathrm{Rit} = \frac{\mathrm{IHSI_{it}} - \mathrm{IHSI_{it-1}}}{\mathrm{IHSI_{it-1}}}$$

$$\mathrm{Rmt} = \frac{\mathrm{IHSG_{it}} - \mathrm{IHSG_{it-1}}}{\mathrm{IHSG_{it-1}}}$$

Where: IHSI : Individual stock price index
IHSG : Combined stock price index

Unexpected earnings (UE) are calculated using the earnings per share (EPS), measured with a random walk model and closing stock price (P). The EU formula is:

$$UE_{it} = \frac{EPS_{it} - EPS_{it-1}}{P_{it-1}}$$

4. Managerial Ability (MA)

Managerial ability measurement was first developed by Demerjian et al. (2012), and used by Baik et al. (2020), Krishnan et al. (2021) and other researchers to estimate the efficiency of companies in an industry. This process involves two steps. First, using data envelopment analysis (DEA), a non-linear optimization procedure used to evaluate the relative efficiency of decision-making units can be calculated. In the first stage, company efficiency is predicted using the following optimization model (Krishnan et al., 2021):

$$\max\theta = \frac{Sales}{v1COGS + v2SG\&A + v3PPE + v4OpsLease + v5R\&D + v6Goodwill + v7OtherIntan} \quad (3)$$

Where: Sales : Sales, as output, scaled by total assets
COGS : Cost of goods sold, scaled by total assets
SG&A : Selling, general, and administrative expenses, scaled by total assets
PPE : Property, plant, equipment, scaled by total assets
OpsLease : Operating lease - net, scaled by total assets
R&D : Research and development - net, scaled by total assets
Goodwill : Goodwill yang dibeli, scaled by total assets
OtherIntan : Other intangible assets, scaled by total assets

In equation (3), Sales is the output, while the other seven variables are inputs. The above model is used to predict the efficiency value of a company in a particular industry to identify companies that generate the highest level of revenue from a given set of inputs. The efficiency measure produced by DEA, θ, produces a value between 0.00 and 1.00, which reflects the optimization program. Observations with a value of 1.00 are the most efficient companies among their industry peers. Thus, the score value of the first stage of processing shows the extent to which the company is relatively more efficient compared to other companies in the related industry. The results of data processing using Stata software in equation 3 will obtain the theta value which will then be used as the dependent variable (FirmEfficiency) in the second stage (equation 4).

Furthermore, in the second stage, the calculation of the company's efficiency level is carried out which is associated with the manager's efficiency level. This is because the overall company efficiency can be influenced by company and manager factors. The second stage is calculated using the Tobit model per industry for each year by separating the efficiency factors of the company and the manager (Krishnan et al., 2021):

$$\begin{aligned} FirmEfficiency = {} & \gamma_0 + \gamma_1 Ln(TotalAssets)_{it} + \gamma_2 MarketShare_{it} + \gamma_3 FreeCashFlowIndicator_{it} \\ & + \gamma_4 Ln(Age)_{it} + \gamma_5 BusinessSegmentConcentration_{it} \\ & + \gamma_6 ForeignCurrencyIndicator_{it} + Year_{it} + \varepsilon_{it} \quad (4) \end{aligned}$$

Where:

TotalAssets : Total assets at year t
MarketShare : The percentage of sales that companies in their industry earn in a given year.

FreeCashFlowIndicator	A dummy variable that is given a value of 1 if the company has non-negative free cash flow (income before depreciation and amortization minus changes in working capital, and minus capital expenditures).
Age	Number of years as listed firm
BusinessSegementConcentration	The ratio of individual business segment sales to total sales of all segments in the company
ForeignCurrencyIndicator	A dummy variable that is assigned a value of 1 if the firm reports a non-zero value for foreign currency adjustments.

The residual value based on the second stage model of the estimation equation (4) is the MA-Score. The next stage is to rank based on the decile of the residual value based on each year and industry to create a more comparable MA-Score value across observation periods and each industry (Krishnan et al., 2021). The ranking results based on decile become the main variable of managerial ability (MA) used in Model 1.

RESEARCH RESULTS AND DISCUSSION

1. Descriptive Statistics

Table 2 reports descriptive information of the variables used in the study. All continuous variables were winsorized at 1% and 99%, except for CAR data which was wonorized at 5% and 95% as the lower and upper limits to overcome outliers, especially data related to CAR (Herusetya, 2024). CAR has an average of 0.570, a standard deviation of 1.212, a minimum of -0.450, and a maximum of 3.627. UE has an average of 0.640, a standard deviation of 1.591, a minimum of -16.754, and a maximum of 51.590. MA has a mean of 0.494, a standard deviation of 0.295, a minimum of 0, and a maximum of 1. This is because the results of the MA-score have been ranked based on decile, so the value of MA is only between 0.00 and 1.00, where 1.00 is the highest level of managerial ability. The mean, minimum, and maximum values of other control variables can be seen in Table 2.

TABLE 2
DESCRIPTIVE STATISTICS

Variable	Mean	Standard Deviation	Minimum	Maximum
CAR	0.570	1.212	-0.450	3.627
UE	0.064	1.591	-16.754	51.590
MA	0.494	0.295	0	1
SIZE	14.765	1.744	8.561	19.722
LEV	0.693	3.768	0.003	90.990
BIG4	0.291	0.455	0	1
LOSS	0.319	0.466	0	1
SGR	0.034	0.295	-0.537	0.714
COV	0.500	0.500	0	1
FIDI	0.268	0.443	0	1
OCF	0.057	0.102	-0.523	0.771
MB	1.683	1.538	0	5

All continuous variables are winsorized at 1% and 99% for data outliers, except for CAR are winsorized at 5% and 95%. Refer to Appendix 1 for all variable definitions. Source: Stata ver. 18.0 output results.

2. Correlation Analysis

The results of the correlation analysis between all study variables can be seen in Table 3. In Table 3, the correlation between MA and UE is not significant at the 10% level, and MA also has no significant correlation with CAR

TABLE 3
CORRELATION ANALYSIS

Variable	CAR	UE	MA	SIZE	LEV	BIG4	LOSS	SGR	COV	FIDI	OCF	MB
CAR	1.000											
UE	0.010	1.000										
MA	-0.012	0.028	1.000									
SIZE	-0.058**	-0.003	-0.167***	1.000								
LEV	-0.001	0.009	0.035	-0.162***	1.000							
BIG4	0.003	-0.015	-0.057**	0.427***	-0.039	1.000						
LOSS	-0.072***	0.016	0.049*	-0.252***	0.101***	-0.156***	1.000					
SGR	0.136***	0.026	0.001	0.082***	-0.056**	0.073***	-0.296***	1.000				
COV	-0.337***	0.050*	-0.002	0.009	0.008	-0.005	0.139***	-0.136***	1.000			
FIDI	-0.049*	0.049*	0.001	-0.001	0.122***	-0.167***	0.461***	-0.148***	0.051*	1.000		
OCF	-0.024	0.006	-0.082***	0.191***	-0.012	0.263***	-0.288***	0.052*	0.054**	-0.225***	1.000	
MB	0.098***	-0.031	0.010	-0.027	-0.066**	0.128***	-0.093***	0.107***	0.005	-0.277***	0.285***	1.000

***, **, and * indicate the coefficient of pairwise correlation is significant at the 1%, 5%, and 10% levels respectively. Refer to Appendix 1 for all variable definitions.

The correlation between CAR and other control variables is positive and significant (SGR and MB), and negative and significant (SIZE, LOSS, COV, and FIDI). While UE is positively and significantly correlated with COV and FIDI. Other variables can be seen in Table 3.

3. Hypothesis Test Results and Discussion

Before conducting the H1 hypothesis test and other additional tests, the author conducted classical assumption tests because the estimation model used was the OLS estimation model. The test results did not pass the heteroscedasticity test using the Breusch-Pagan/Cook-Weisberg test for heteros cedasticity or White's test. "With the presence of heteroscedasticity, consistent estimates of the regression coefficients can still be produced; nevertheless, these estimates are inefficient and the standard errors of the estimates will be biased" (Baltagi, 2005; Kohler & Kreuter, 2012). However, it can be overcome by conducting regression with robust standard errors, such as Huber/White/Sandwich which are used in the context of robustness to heteroscedasticity (Source: Stata ver. 18.0). In addition, the classical assumption test for multicollinearity also did not pass for our empirical models that use interaction variables, i.e., UE and other vaiables. We cannot remedy using the centering method (Aiken & West, 1991) because the data is too small and have possibility for missing data

Table 4 reports the results of the H1 hypothesis test. Model 1 has an F value and significance of 10.66 and <1%, indicating that the model specification meets the requirements. Model 1 also has an R-square and adjusted R-square of 14.83% and 13.44%, respectively, indicating a high ability to explain the dependent variable.

TABLE 4
HYPOTHESIS TESTING RESULTS

Independent Variable	Predicted Sign	Model 1					
		Dependent Variable (CAR)					
		Panel A			Panel B		
		Coeff.	t-test	Prob.	Coeff.	t-test	Prob.
Constant	?	1.568***	4.76	0.000	1.480***	4.68	0.000
UE	+	0.143	0.23	0.820	0.088	0.14	0.891
UE*MA	+	-0.188	-1.22	0.224			
UE*MA_HIGH	+				-0.122	-1.03	0.301
UE*SIZE	-	0.012	0.27	0.787	0.007	0.16	0.870
UE*LEV	-	0.166**	2.07	0.039	0.177**	2.08	0.038
UE*BIG4	+	0.540*	1.84	0.066	0.566*	1.94	0.052
UE*LOSS	-	-0.188	-1.31	0.190	-0.200	-1.35	0.176
UE*SGR	+	0.009	0.07	0.948	0.032	0.23	0.820
UE*COV	-	-0.062	-0.86	0.392	0.007	0.06	0.948
UE*FIDI	-	-0.216	-1.32	0.186	-0.224	-1.37	0.172
UE*OCF	-	0.694	1.30	0.195	0.689	1.28	0.202
UE*MB	+	-0.068	-0.98	0.328	-0.070	-1.00	0.318
MA	+	-0.107	-1.00	0.318			
MA_HIGH	+				-0.071	-0.70	0.486
SIZE	-	-0.045**	-2.13	0.033	-0.042**	-2.01	0.045
LEV	-	0.007	0.83	0.405	0.008	0.92	0.358
BIG4	+	0.044	0.56	0.574	0.039	0.50	0.620
LOSS	-	-0.055	-0.65	0.513	-0.049	-0.58	0.559
SGR	+	0.347***	3.06	0.002	0.349***	3.07	0.002
COV	-	-0.791***	-12.31	0.000	-0.796***	-12.38	0.000
FIDI	-	0.006	0.08	0.935	0.010	0.12	0.908
OCF	-	-0.625*	-1.78	0.075	-0.607	-1.73	0.084
MB	+	0.079***	3.61	0.000	0.079***	3.57	0.000
F-value			10.66			10.61	
Prob. > F			0.000			0.000	
R-Squared			0.1483			0.1476	
Adjusted R-Squared			0.1344			0.1337	
N			1,308			1,308	

***, **, and * indicate significant at the 1%, 5%, and 10% levels respectively, using a two-tailed test. Refer to Appendix 1 for all variable definitions. Source: Stata ver. 18.0 output results.

In Model 1, Panel A, the coefficient of UE*MA is -0.188 (t-stat = -1.22), but is not statistically significant at the 10% level (prob. = 0.224) with a two-tailed test. This indicates that the UE*MA variable has no effect on market reactions as measured by the earnings response coefficient (ERC). The results of this test do not find evidence that managerial ability has information content that can be captured by capital market players

.The interaction variables between UE and the control variables in Model 1 have positive and significant information content, namely UE*LEV and UE*BIG4. This indicates that companies with larger debt loans are considered to be able to improve company operations and

survive in difficult conditions and can provide positive information content to cumulative abnormal returns. Also, companies audited by the Big Four auditors can provide positive information content to cumulative abnormal returns.

4. Additional Tests

This study conducts robustness testing using managerial ability at the highest level. Following Baik et al. (2020), high ability managers are measured by an MA score at level 0.9 or more (the highest 10% in the decile), and are given a number 1, and 0 otherwise.

The following is a model for a sensitivity test based on Model 1:

$$CAR_{it} = \alpha_0 + \alpha_1 UE_{it} + \alpha_2 UE*MA\_HIGH_{it} + \alpha_3 UE*SIZE_{it} + \alpha_4 UE*LEV_{it} + \alpha_5 UE*BIG4_{it} + \alpha_6 UE*SGR_{it} + \alpha_7 UE*LOSS_{it} + \alpha_8 UE*COV_{it} + \beta_9 UE*FIDI_{it} + \beta_{10} UE*OCF_{it} + \beta_{11} UE*MB_{it} + \alpha_{12} MA\_HIGH_{it} + \alpha_{13} SIZE_{it} + \alpha_{14} LEV_{it} + \alpha_{15} BIG4_{it} + \alpha_{16} SGR_{it} + \alpha_{17} LOSS_{it} + \alpha_{18} COV_{it} + \alpha_{19} FIDI_{it} + \alpha_{20} OCF_{it} + \alpha_{21} MB_{it} + \varepsilon_{it} \quad (5)$$

The coefficient α2 (UE*MA_HIGH) is predicted to be significant and positive. This means that the market can capture the information content of high-ability managers and considers high-ability managers as an important factor in considering investment decisions. The results of the robustness test for high-ability managers (MA_HIGH) are shown in Table 4, Panel B. The coefficient of UE*MA_HIGH (-0.122) is not at the 10% level with a two-tailed test (t-test = -1.03, prob. = 0.301), in line with the main test in hypothesis H1. Thus, it is concluded that even though high-ability managers are used as a measure of managerial ability, the market still cannot capture the information content contained therein. This additional test supports the main test of hypothesis H1. This study also conducts additional tests to distinguish whether during the COVID-19 pandemic period managerial ability has a different role between the period before the pandemic crisis in the observation year 2018-2019 and during the pandemic period in 2020-2021. This can be seen in the interaction variable UE*MA*COV which will be used in the empirical model as follows:

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 UE*MA_{it} + \beta_3 UE*SIZE_{it} + \beta_4 UE*LEV_{it} + \beta_5 UE*BIG4_{it} + \beta_6 UE*SGR_{it} + \beta_7 UE*LOSS_{it} + \beta_8 UE*COVID_{it} + \beta_9 UE*FIDI_{it} + \beta_{10} UE*OCF_{it} + \beta_{11} UE*MB_{it} + \beta_{12} MA*COV_i + \beta_{13} UE*MA*COV_{it} + \beta_{14} UE* SIZE*COV_{it} + \beta_{15} UE*LEV*COV_{it} + \beta_{16} UE*BIG4*COV_{it} + \beta_{17} UE*SGR*COV_{it} + \beta_{18} UE*LOSS*COV_{it} + \beta_{19} UE*FID*COVI_{it} + \beta_{20} UE*OCF*COV_{it} + \beta_{21} UE*MB*COV_{it} + \beta_{22} MA_{it} + \beta_{23} SIZE_{it} + \beta_{24} LEV_{it} + \beta_{25} BIG4_{it} + \beta_{26} SGR_{it} + \beta_{27} LOSS_{it} + \beta_{28} COV_i + \beta_{29} FIDI_{it} + \beta_{30} OCF_{it} + \beta_{31} MB_{it} + \varepsilon_{it} \quad (6)$$

The expectation of the coefficient β13 (UE*MA*COV) is positive, indicating that the market captures additional information content from managerial ability which is very necessary in the COVID-19 period. Furthermore, this study also conducts a sensitivity test using the high ability manager variable (MA_HIGH) in equation (6) using the interaction variable UE*MA_HIGH*COV. The results of these additional tests are presented in Table 5, Panels A and B. The results of the additional tests in Table 5, Panels A and B do not find significant evidence of additional information content, both MA and MA_HIGH in the COVID-19 period, indicating that the market also cannot capture the importance of managerial ability during the crisis period due to the COVID-19 pandemic.

Based on the results of the main test and these additional tests, it can be concluded that information about managerial ability, even managerial ability at the highest level of managers, cannot be captured by the market. Alternative explanations for the results of this test may be caused by several things as follows. First, it is possible that there is information asymmetry between management and shareholders so that the market has not been able to measure managerial ability to be used in decision-making considerations. Not all non-financial information such as high ability managers is available to capital market players that can be used as analysis, both financial analysts and sophisticated investors to assess entity performance, so there is no information available for entities that have high ability managers.

Second, in making investment decisions, Indonesian capital market players are likely to focus more on day-trade, gut feeling, and market trends, as a result investors focus more on investing in stocks that can provide short-term profits than conducting in-depth analysis of the company to be invested in, including other important non-financial information.

TABLE 5
ADDITIONAL TEST RESULTS

Independent Variable	Predicted Sign	Model 2					
		Dependent Variable (CAR)					
		Panel A			Panel B		
		Coeff.	t-test	Prob.	Coeff.	t-test	Prob.
Constant	?	1.391	4.00	0.000	1.444	4.49	0.000
UE	+	0.539	0.41	0.679	1.145	0.83	0.410
UE*MA	+	-0.461*	-1.74	0.083			
UE*MA_HIGH	+				-0.477	-0.96	0.337
UE*SIZE	-	-0.004	-0.05	0.961	-0.055	-0.61	0.545
UE*LEV	-	0.551***	2.82	0.005	0.439**	2.39	0.017
UE*BIG4	+	0.866	1.49	0.135	0.976*	1.69	0.091
UE*LOSS	-	0.133	0.39	0.693	-0.057	-0.15	0.881
UE*SGR	+	-0.320	-0.97	0.333	-0.302	-0.91	0.362
UE*COV	-	-0.011	-0.01	0.994	-0.741	-0.46	0.642
UE*FIDI	-	-1.088**	-2.29	0.022	-0.871*	-1.81	0.071
UE*OCF	-	-2.268	-0.99	0.321	-1.274	-0.58	0.560
UE*MB	+	-0.042	-0.30	0.765	-0.059	-0.41	0.681
MA*COV	-	-0.337	-1.55	0.120	-0.159	-0.78	0.438
UE*MA*COV	-	0.207	0.61	0.541			
UE*MA_HIGH*COV	-				0.345	0.67	0.505
UE*SIZE*COV	-	-0.010	-0.10	0.921	0.042	0.39	0.694
UE*LEV*COV	-	-0.428**	-2.03	0.042	-0.303	-1.48	0.138
UE*BIG4*COV	-	-0.422	-0.62	0.538	-0.508	-0.74	0.460
UE*LOSS*COV	-	-0.376	-0.99	0.324	-0.166	-0.39	0.694
UE*SGR*COV	-	0.510	1.37	0.170	0.463	1.24	0.215
UE*FIDI*COV	-	0.991**	1.96	0.050	0.740	1.44	0.150
UE*OCF*COV	-	3.162	1.31	0.191	2.179	0.93	0.351
UE*MB*COV	-	-0.022	-0.13	0.894	-0.015	-0.09	0.929
MA	+	0.062	0.40	0.687			
MA_HIGH	+				0.010	0.07	0.942
SIZE	-	-0.039*	-1.79	0.073	-0.040*	-1.88	0.061
LEV	-	0.015*	1.65	0.100	0.014	1.45	0.148
BIG4	+	0.050	0.63	0.528	0.045	0.57	0.570
LOSS	-	-0.059	-0.70	0.487	-0.050	-0.59	0.555
SGR	+	0.356***	3.13	0.002	0.364***	3.18	0.001
COV	-	-0.635***	-5.12	0.000	-0.786***	-11.52	0.000
FIDI	-	0.000	0.00	0.998	0.001	0.01	0.988
OCF	-	-0.771**	-2.16	0.031	-0.705**	-1.98	0.048
MB	+	0.082***	3.73	0.000	0.079***	3.59	0.000
F-value			7.73			7.53	
Prob. > F			0.000			0.000	
R-Squared			0.1582			0.1547	
Adjusted R-Squared			0.1377			0.1342	
N			1,308			1,308	

***, **, and * indicate significant at the 1%, 5%, and 10% levels respectively, using a two-tailed test. Refer to Appendix 1 for all variable definitions. Source: Stata ver. 18.0 output results.

CONCLUSION, LIMITATIONS, AND SUGGESTIONS

A. Conclusion and Implications

This study empirically tests the effect of managerial ability on market reaction. Managerial ability is measured using the Demerjian et al. (2012) model, while market reaction is measured using the earnings response coefficient (ERC). The study observations include samples from all public companies on the IDX listed from 2017 to 2021 with a final number of observations of 1,380 in firm-years, except for the financial sector. By using the non-probability sampling method and purposive sampling technique, and the linear multiple regression estimation model, this study has not found evidence that managerial ability can be detected by the market. In other words, the market does not react to the information content of managerial ability.

By using additional testing of high managerial ability, this study also has not found evidence that the market can capture the information content measured by the ERC from the highest level of managerial ability. This study then conducted additional testing during the crisis period due to the COVID-19 pandemic, namely 2020 and 2021 and compared it with the period before COVID-19 in the 2017-2019 observation period, and how the market reacted to managerial ability during the COVID-19 period compared to the non-COVID-19 period. This additional test has not found evidence that the market will react more positively or negatively to managerial ability. This shows that during the crisis period due to the COVID-19 pandemic there is no incremental information from the existence of managerial ability. The results of this study are robust considering the results of sensitivity and additional tests.

The results of this study provide several implications as follows. First, it is suspected that there is information asymmetry between management and shareholders so that the market has not been able to measure managerial ability to be used in decision-making considerations. Second, in making investment decisions, the Indonesian market focuses more on day-trade, gut feeling, and market trends so that capital market players focus more on investing in stocks that can provide short-term profits rather than conducting in-depth analysis of the companies to be invested in.

B. Limitations and Suggestions

This study has limitations because the measurement of market reactions is carried out only using the earnings response coefficient tool and the observation period is relatively short. The large number of outlier data on CAR mostly comes from data from 2018 where the global financial crisis occurred so that there is a possibility of a market error in 2018. Future studies can consider the limitations of this study.

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Appendix 1

Variable		Definition
CAR	=	Cumulative abnormal return
UE	=	Unexpected earnings
MA	=	Managerial ability
SIZE	=	Natural logarithm of total assets
LEV	=	Leverage
BIG4	=	The size of audit firm, as a proxy for audit quality, is a dummy variable given a value of 1 if the company is audited by a Big 4; 0 otherwise.
SGR	=	Sales growth, i.e., (sales t - sales t-1)/Sales t-1
LOSS	=	Dummy variable, assigned to 1 if the firm experience net loss in year t; 0 if otherwise
COV	=	Dummy variable, assigned to 1 if the year is 2020 and 2021, where the pandemic COVID-19 occurs
FIDI	=	Financial distress. Following Altman Z-score. Assigend to 1 if the Z-score is below 1.2; 0 if otherwise.
OCF	=	Operating cash flows, scaled by total asset
MB	=	Market to book value ratio
i	=	Firm indicator for firm i
t	=	Year indicator for year t
εit	=	Residual errors