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AUDIT REPORT TIMELINESS BEFORE AND DURING THE COVID-19 PANDEMIC: EVIDENCE FROM THE MARKET REACTION

AKTUALNOŚĆ RAPORTÓW AUDYTOWYCH PRZED I PODCZAS PANDEMII COVID-19: NA PODSTAWIE REAKCJI RYNKU

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ABSTRACT

This study investigates the market response to the timeliness of audit reports, specifically before and during the coronavirus disease 2020 (COVID-19) pandemic. We use the earnings response coefficient (ERC) as our proxy to assess the market reaction to the timeliness of audit reports. We applied the purposive sampling method to all companies listed on the Indonesia Stock Exchange (IDX), except for the financial industry, and obtained 977 firm-year observations as our final sample. Using linear multiple regression models in our analysis, we discovered no indication of a market response to the timeliness of audit reports for our full sample during 2018–2020. However, we find evidence that during the COVID-19 pandemic in 2020, the market reacted more positively to the audit report timeliness compared to the pre-COVID-19-pandemic period. Our results indicate that investors were more tolerant of delayed audit reports during the COVID-19 pandemic due to the increased audit efforts and longer time needed to gather sufficient evidence to issue audit reports.

Key words: audit report lag, audit report timeliness, earnings response coefficient, stock return, COVID-19, Indonesia

ABSTRAKT

Niniejsze badanie dotyczy reakcji rynku na terminowość sprawozdań z audytu, w szczególności przed i w trakcie pandemii koronawirusa 2020 (COVID-19). Użyto współczynnik odpowiedzi zysków (ERC) jako wskaźnika zastępczego do oceny reakcji rynku na terminowość raportów z audytu. Zastosowano metodę celowego doboru próby do wszystkich spółek notowanych na Indonezyjskiej Giełdzie Papierów Wartościowych (IDX), z wyjątkiem branży finansowej, i jako ostateczną próbe poddano obserwacji 977 firm. Stosując w analizie modele liniowej regresji wielokrotnej, nie stwierdzono żadnej reakcji rynku na terminowość sprawozdań z kontroli dla pełnej próby w latach 2018–2020. Wskazano jednak dowody na to, że podczas pandemii COVID-19 w 2020 r. rynek reagował bardziej pozytywnie na terminowość raportu z audytu w porównaniu z okresem przed pandemii COVID-19. Uzyskane wyniki potwierdzaja, że inwestorzy wykazywali większą tolerancję wobec opóźnionych raportów audytowych podczas pandemii koronawirusa z uwagi na wzrost wysiłku audytowego i dłuższego czasu potrzebnego do zgromadzenia wystarczajcych dowodów, aby opublikować raporty audytowe.

Słowa kluczowe: opóźnienia raportów audytowych, aktualność raportów audytowych, współczynnik zarobków w odpowiedzi na zysk, zwrot z akcji, COVID-19, Indonezja

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Introduction

Since 2020, the world has been rocked by the outbreak of an infectious disease, namely coronavirus disease 2019 (COVID-19) (World Health Organization [WHO], 2021). According to the WHO, the disease was first detected at the end of 2019 in Wuhan, China; it then spread quickly throughout the world until Mar. 11, 2020, when it was declared a COVID-19 pandemic. This pandemic has greatly affected various aspects of human life worldwide until several countries set a lockdown policy, including Indonesia (Pasupati & Husain, 2020; Pemerintah Indonesia, 2021).

In March 2020, the Financial Reporting Council (FRC) released a notification guide for auditors to consider the impact of social distancing due to the COVID-19 pandemic on audit quality and called for better corporate governance so that management monitoring can run well and accounting information can be conveyed on time (Pasupati & Husain, 2020).

In addition to the FRC, the Institute of Chartered Accountants of Scotland (ICAS) and the Institute of Chartered Accountants in England and Wales (ICAEW) issued the latest guidance for auditors regarding inventory audit testing during the COVID-19 pandemic due to the increasing spread of COVID-19 cases and social distancing around the world (Barbour, 2020; ICAEW, 2021).

The company and audit committee members received a signal that there was a cut in audit fees due to the economic impact caused by the COVID-19 pandemic. The pandemic indirectly affected the quality of financial reports and the length of the audit process (Pasupati & Husain, 2020). The COVID-19 pandemic caused an increase in audit risk and caused delays in presenting the audit reports because auditors had limited access to audit evidence due to physical distancing (Dancey, 2020). Auditors were also more conservative in risk assessments in the pandemic era than under normal conditions (Arnold, 2020; ICAEW, 2021; Wijasari & Wirajaya, 2021)

The United Nations Children's Fund (UNICEF) conducted a survey in Indonesia and found that COVID-19 affected employment, micro-enterprises, food security, access to health, education services and social protection programmes (UNICEF, United Nations Development Program [UNDP], the Australia–Indonesia Partnership for Economic Development [PROSPERA] & the Social Monitoring and Early Response Unit [SMERU] Research Institute, 2021). According to Sri Mulyani, Minister of Finance of Indonesia, the four economic sectors most affected by the pandemic were the financial sector, households, the micro, small and medium enterprise (MSME) sector and corporations (https://bisnis.tempo.co/). Indonesia also briefly implemented a local lockdown at the peak of the rapidly increasing COVID-19 cases, precisely around the end of March 2020 (Consumer News and Business Channel [CNBC] Indonesia, Mar. 30, 2020). This local lockdown also affected companies' ability to issue timely audited financial reports (Arnold, 2020). Furthermore, almost all industries were negatively affected by COVID-19; 60% of them were paralysed and could not operate normally again (Antara & Setiawan 2020).

Under the Financial Services Authority (*Otoritas Jasa Keuangan*, hereafter OJK), public companies listed on the Indonesia Stock Exchange (IDX) must report audited financial statements annually with a time limit set based on the applicable rules and regulations. However, due to the

outbreak of the COVID-19 pandemic and the prevailing situation in Indonesia, OJK decided — through official announcements and press releases — to provide relief from the deadline for submitting annual financial reports (OJK, 2020). Therefore, according to this press release, the submission date for the audited financial report was fixed as no later than May 31, 2020, which used to beMar. 30 in previous years. In contrast, the submission date for the annual report was fixed as no later than Jun. 30, 2020, which used to be Apr. 30 in previous years.

The change in the deadline for audited financial statements benefitted the companies because it provided a tolerableperiod to adjust to the then-prevailing pandemic conditions. However, from the user's perspective, delayed financial statements may cause inconvenience because the information that should be obtained on time is delayed (Girsang, Machpudin & Putra, 2017; Lievia & Herusetya, 2022; Pasupati & Husain, 2020; Sambuagaet al., 2021). Considering that financial information in the audited financial statements is one of the details needed by capital market players, for example investors, for their investment decisions, the timeliness and accuracy of these audited financial statements are very important. However, based on official announcements issued by the IDX in June–August every year, some companies are late in submitting their audited financial reports and are subject to written warnings and fines (https://www.idx.co.id). For 2020, despite the tolerable extension given, some companies were still late in submitting their audited financial statements.

Girsang et al. (2017) and Shulthoni (2013) concluded that audit delay has a negative effect on investor reactions, whereby the higher the audit delay, the greater is the investors' sense of uncertainty in decision-making. Meanwhile, Herdiana (2017) and Paramita (2014) found that punctuality positively influences market reactions. Another study by Dewi, Putri and Idawati (2019), Lestari and Nuryatno (2018) and Dwiyani, Badera and Sudana (2017) concluded that audit report lag (ARL) does not have a significant effect on market reaction. Most of these studies measured the market reaction using abnormal returns (ARs), for example Dewi et al. (2019), Lestari and Nuryatno (2018) and Herdiana (2017). On the other hand, Girsang et al. (2017) and Paramita (2014) used the cumulative abnormal return (CAR) but not with interaction variables. These studies

presented mixed results, used different models and were performed under normal conditions/periods.

We are motivated to do this research for a few reasons. First, our study investigates how the market reacted to delays in audited financial statements during the COVID-19 period in Indonesia. As far as we know, there have been no studies on this topic previously. Second, our study uses an earnings response coefficient (ERC) model to measure the market reactions, differently from previous studies in Indonesia, as mentioned earlier. Third, the results of previous research studies were inconsistent regarding the market reaction to the ARL and were carried out under normal conditions, not during pandemic periods, such as COVID-19.

Literature Study and Hypotheses Development

Signalling theory

Spence (1973) first put forward the signalling theory, which states that signalling is the company's effort — as a provider of information — to convey an accurate picture of the problem to other parties outside the company so that they are willing to invest even though they are under uncertainty. Signalling theory applies when the company distributes signals to users of financial statements outside the company. Then, Ross (1977) developed the theory, stating that for a company's stock price to increase, information must be conveyed to potential investors by its executives. Therefore, through financial reports, the company provides information to parties outside the company that the company is making a profit and has implemented accounting policies according to applicable standards.

Audit report timeliness

Audit report timeliness[1] is the total number of days the auditor takes to complete the audited financial report after the closing date of the company's books. Ashton, Graul and Newton (1989) define ARL as the duration in

which the audited financial report is processed, which is calculated from the closing date of the book until the date of the independent auditor's report. Several factors may influence audit report timeliness. According to Ashton, Willingham and Elliott (1987), the incompatibility between the auditor and management to agree on the audit results is one of the communication processes that may take longer, resulting in delay in finishing the audit in a timely manner.

In the era of the COVID-19 pandemic, in 2020, OJK decided to relax the deadline for submitting annual financial reports after considering the prevailing conditions due to the COVID-19 pandemic in Indonesia. Therefore, through official announcements and press releases, OJK stated that the date of submission of audited financial statements be no later than May 31, 2020 (previously, the deadline was on Mar. 30), and the submission of annual reports was to be before Jun. 30, 2020 (previously, the deadline was Apr. 30).

Market reaction and audit report timeliness

The studies of Herdiana (2017), Handoko and Sudarno (2015) and Paramita (2014) concluded that audit report timeliness has a positive influence on investor reactions. Their studies found that the higher the timeliness of audit reports, the higher the market will react because this is good news for investors. In addition, Handoko and Sudarno (2015) suggested that entities that disclose their financial statements timely have better performance and greater ARs.

In other studies, Shulthoni (2013) and Syafruddin (2006) found that audit delay significantly affects investor reactions. Shulthoni (2013) tested the market reaction using two proxies and showed the same results on AR proxies and trading volume activity. These results also align with those of Girsang et al. (2017), who found that audit delay negatively affects investor reactions. Their study results showed that the longer the audit delay, the greater is the investors' sense of uncertainty in making decisions.

Meanwhile, a research study by Diputra and Anna (2014), using the Kompas 100 Index, concluded that audit delay does not significantly affect investor reactions for 2010–2012 issuers. They argued that the companies

listed on Kompas 100 are specifically selected companies and, on average, have good performance. Therefore, investors no longer consider the timeliness of submitting audited financial statements. In addition, research studies by Dewi et al. (2019), Lestari and Nuryatno (2018) and Dwiyani et al. (2017) also found consistent results that audit delay does not have a significant effect on the market reaction. These studies signify that ARL does not affect stock price fluctuations, and there are no differences in the market reactions towards the timely submission of audited financial statements.

Based on the literature review, we conclude that the findings of previous studies are mixed. We argue that longer time taken for submission of audited financial statements by the auditors can have a negative market reaction, considering that the market requires timely information for making investment decisions. In other words, the information content conveyed to the market through late financial statement information can negatively affect the market reactions, measured by the ERC. Therefore, Hypothesis H1 to be tested is as follows:

H1: The market will react negatively to delay in audited financial statements, *ceteris paribus*.

Market reaction to audit report timeliness in the COVID-19 era

To the authors' knowledge, no research studies have examined the market reaction to ARL in the era of the COVID-19 pandemic. We only found previous research studies that examined the level of audit delay during the COVID-19 pandemic, namely research studies from Wijasari and Wirajaya (2021). Wijasari and Wirajaya (2021) found a significant difference in the audit delay before and during the COVID-19 pandemic. They found that the audit delay during the COVID-19 pandemic was much greater. This significant difference was due to the limitations faced by auditors in obtaining audit evidence due to social and physical distancing. Before the pandemic, auditors met face-to-face with clients, tracked records directly and confirmed what needed to be confirmed in person to obtain and collect audit evidence. However, during the pandemic in 2020, all audit procedures significantly changed because auditors could not trace, obtain and collect

evidence directly on audit fields and meet with the clients but had to go through virtual meetings and use online media.

Based on the arguments above, we suspect that audit report timeliness during the COVID-19 pandemic will be higher than in pre-pandemic times, and the market will react more negatively to audit report timeliness. Thus, our Hypothesis H2 to be tested is as follows:

H2: The market will react more negatively to delays in audited financial reports in the COVID-19 pandemic era, *ceteris paribus*.

Research Method

Population and sample

The study population includes all publicly listed companies on the IDX, except companies in the financial sector, with an observation period of 2018–2020. The sources of the study data are the secondary data obtained from the audited financial reports published on the companies' official websites, the IDX website (www.idx.co.id) and the Standard and Poor's (S&P) Global Market Intelligence website (www.spglobal.com/marketintelligence/en/). Statistical data on company stocks of Individual Stock Price Index (*Indeks Harga Saham Individual* or IHSI) and Composite Stock Price Index (*Indeks Harga Saham Gabungan* or IHSG) were obtained through the IDX website and *Yahoo Finance* (www.finance.yahoo.com). We use a non-probabilistic sampling method in collecting our quantitative financial data from the above sources and apply a purposive sampling technique using certain criteria. We obtain 977 firm-year observations as our final sample. Table 1 shows the sample selection process of the study.

IDR, Indonesian Rupiah (Rp); IDX, Indonesia Stock Exchange; S&P, Standard and Poor's.

The data were processed using the Statistical Software for Data Science (STATA), version 15.0 manufactured by StataCorp LLC. The data analysis methods include descriptive statistical analysis, correlation analysis, classical assumption test, model specification test and hypothesis testing.

Table 1. Sample selection

Description	Total
All listed firms in the IDX as of 2020 with audited financial statements	716
Less: firms in the financial industries	(95)
Less: *new listing* firms during 2018–2020	(151)
Less: firms with non-IDR presentation in the financial statements	(79)
Less: firms without complete financial statements during 2018–2020	(51)
Total number of companies	340
Total firm-year observations during 2018–2020	1,020
Less: data outliers from observations during 2018–2020	(43)
Final observations in firm-years	977

Sources: IDX and S&P Global Market Intelligence.

Empirical model

Our study develops the information content model using multiple regression models from previous studies, such as those by Collins and Kothari (1989), Balsam, Krishnan and Yang (2003) and Dewi and Herusetya (2015). The empirical research model for testing Hypothesis H1 is as follows:

$$CAR_{it} = \alpha 0 + \alpha 1\ UE_{it} + \alpha 2\ UE{*}ARL_{it} + \alpha 3\ UE{*}Size_{it} + \alpha 4\ UE{*}LEV_{it} + \alpha 5\ UE{*}Grow_{it} +$$
$$+ \alpha 6\ UE{*}Loss_{it} + \alpha 7\ UE{*}Big4_{it} + \alpha 8\ ARL_{it} + \alpha 9\ Size_{it} + \alpha 10\ LEV_{it} +$$
$$+ \alpha 11\ Grow_{it} + \alpha 12\ LOSS_{it} + \alpha 13\ Big4_{it} + \varepsilon_{it} \qquad \text{(Model 1)}$$

Model 1 is used to test Hypothesis H1. The main variable of our concern is UE*ARL, the interaction variable between unexpected earnings (UE) and the timeliness of audit reports (in terms of ARL). Coefficient $\alpha 2$ is the ERC and is negatively predicted and statistically significant. The prediction is supported if coefficient $\alpha 2 < 0$, which implies that the market reacts negatively to the timeliness of audit reports (ARL). The predictions for each control variable are as follows: $\alpha 3 > 0$, $\alpha 4 < 0$, $\alpha 5 > 0$, $\alpha 6 < 0$ and $\alpha 7 > 0$.

The definitions of the variables for Models 1 and 2, except for the interaction variables, are as follows:

CAR = cumulative abnormal return is the number of ARs of stock *i* for 12 months after adjusting the market return, from April 1 of the year *t* to March end of year *t* + 1; UE = unexpected earnings calculated by earnings per share (EPS) in *t* minus EPS in year *t* – 1, then divided by year-end closing price in *t* – 1; ARL = audit report lag/audit delay/audit report timeliness, calculated using natural logarithm from the number of days after the date of the balance sheet to the date of the audit report; COVID = dummy variable, assigned '1' if the year is 2020 (when the pandemic began); '0,' otherwise; Size = natural logarithm of total assets; LEV = leverage, that is, the debt-to-equity ratio; Grow = sales growth (Sales in year *t* – Sales in year [*t* – 1])/Sales in *t* – 1; Loss = dummy variable, assigned '1' if the company experiences loss in year *t*; '0,' otherwise; Big4 = dummy variable, assigned '1' if one of the Big Four audit firms (i.e., Deloitte, PricewaterhouseCoopers (PwC), Ernst & Young, and KPMG…) audits the company; and '0,' otherwise; $\alpha 0$ and $\beta 0$ = constants; εit = residual error; subscripts *i* and *t* = identification for company *i* and year *t*, respectively.

The empirical research model (Model 2) for testing Hypothesis H2 is as follows:

$$\begin{aligned} CAR_{it} &= \beta 0 + \beta 1\ UE_{it} + \beta 2\ UE{*}ARL_{it} + \beta 3\ UE{*}ARL{*}COVID_{it} + \beta 4\ UE{*}COVID_{it} + \\ &+ \beta 5\ ARL{*}COVID_{it} + \beta 6\ UE{*}Size_{it} + \beta 7\ UE{*}LEV_{it} + \beta 8\ UE{*}Grow_{it} + \\ &+ \beta 9\ UE{*}Loss_{it} + \beta 10\ UE{*}Big4_{it} + \beta 11\ ARL_{it} + \beta 12\ COVID_{it} + \beta 13\ Size_{it} + \\ &+ \beta 14\ LEV_{it} + \beta 15\ Grow_{it} + \beta 16\ Loss_{it} + \beta 17\ Big4_{it} + \varepsilon i,t \end{aligned} \quad \text{(Model 2)}$$

Model 2 is used to test Hypothesis H2. The main variable of our concern is EU*ARL*COVID. Coefficient b3 of the variable EU*ARL*COVID represents the market reaction of the ARL during the COVID-19 pandemic. Therefore, we predict that coefficient b3 is negative and statistically significant. The prediction is supported if coefficient $\beta 3 < 0$ and is significant, which implies that the market is reacting more negatively to audit report timeliness (ARL) in the COVID-19 era, indicated by the incremental negative coefficient of EU*ARL*COVID towards coefficient $\beta 2$ (UE*ARL). The expectations for each control variable are as follows: $\beta 6 > 0$, $\beta 7 < 0$, $\beta 8 > 0$, $\beta 9 < 0$ and $\beta 10 > 0$.

Operational variables

CAR in COVID

CAR is the dependent variable, calculated using the cumulative market-adjusted return (Dewi & Herusetya, 2015). Dewi and Herusetya (2015) define AR as the actual return above the normal return. Therefore, CAR is the cumulative AR (abnormal return) for the 12 months ending 3 months after the end of the financial year (e.g., Apr. 1, 20 × 0 to Mar. 31, 20 × 1), with the following equation:

$$\mathrm{CAR}it = \Sigma\ \mathrm{AR}it,$$

where the monthly AR is calculated from the difference between the stock return of company i and market return *m* (Dewi & Herusetya, 2015; Paramita, 2020), with the following equation:

$$\mathrm{AR}it = Rit - Rmt,$$

where Rit is the stock return of company i obtained at time *t* (calculated per month starting from Apr. 1, 20 × 0 to Mar. 31, 20 × 1); and *Rmt* is the market return at time *t* (calculated per month starting from Apr. 1, 20 × 0 to Mar. 31 20 × 1) calculated using the Composite Stock Price Index or IDX Composite (IHSG) (Paramita et al., 2020, p. 87). The equation for obtaining Rit and Rmt is as follows (Dewi & Herusetya, 2015):

$$Rit = (\mathrm{IHSI}\_it - \mathrm{IHSI}\_(it-1))/\mathrm{IHSI}\_(it-1);\ Rmt = (\mathrm{IHSG}\_it - \mathrm{IHSG}\_(it-1))/\mathrm{IHSG}\_(it-1),$$

where *Rit* = stock returns for the company *i* at year *t*; *Rmt* = market return at year *t*; IHSI = Individual Stock Price Index; and IHSG = Composite Stock Price Index.

Meanwhile, the measurement of market reaction using the ERC basic model is based on the relationship between information content in the CAR and the UE (Collins & Kothari, 1989), with the following equation:

$$\mathrm{CAR}it = \alpha + \delta\ \mathrm{UE}it + \varepsilon it,$$

where CAR is the cumulative abnormal return; UE represents the unexpected earnings; coefficient d is the ERC and e is the error term.

Unexpected Earning

UE is a variable used to measure the difference between expected accounting earnings and actual reported earnings (Paramita et al., 2020, p. 80). UE is news that the market has not received before; so when earnings are announced, the market will react (Agustina & Ferlysia, 2012, in Herdiana, 2017). According to Herusetya (2012) and Hermawan (2009), the variable UE is used to capture surprise earnings as measured by the random walk model, as follows:

$$UE = (EPS\_t - EPS\_(t-1))/CP\_(t-1),$$

where UE = unexpected earnings; EP*St* = earnings per share (e.g. Mar. 31, 20 × 1 as *t*); EP*St* – 1 = earnings per share (e.g. Apr. 1, 20 × 0 as *t* – 1); CP*t* – 1 = closing price (e.g. Apr. 1, 20 × 0).

Audit Report Lag

In this research study, ARL is calculated using the natural logarithm of the number of days taken after the date of the balance sheet to the date of the audit report (Dao, Xu & Pham, 2022), with the following equation:
ARL = Ln (Audit Report Date — Balance Sheet Date).

Control variables

This study uses six control variables influencing UE and CAR, namely COVID-19, firm size, leverage, sales growth, net loss and Big Four audit firm.

Results and Discussion

Descriptive statistics

Table 2 presents the descriptive statistics of all variables used in this study with 977 observations, except for the interaction variable. All continuous variables are winsorised 1% and 99% to avoid data outliers. CAR

has a mean value of 0.2832, with a standard deviation of 9.1412. The average company in our sample profile has a CAR rate of 28.32% for 1 year, with a minimum rate of –234.55% and a maximum rate of 182.67%. This large maximum value could be attributed to the year 2018; the average CAR in 2018 was very high due to the possibility of a market error on the IDX in May 2018, which caused the IHSI of all companies in May 2018 to be very high, thus affecting the 2018 CAR. In Table 2, the UE has a mean value of 0.0001, with a standard deviation of 0.1565.

Table 2. Descriptive statistics

Variable	Median	Mean	Standard deviation	Minimum	Maximum
CAR	0.2832	2.8348	9.1412	–2.3455	91.6957
UE	0.0001	0.0038	0.1565	–1.9196	1.8267
ARLD	87	97.2036	35.9895	29	330
ARL	4.4659	4.5156	0.3474	3.3672	5.7990
Assets (millions, IDR)	2,316,065	9,975,840	2.76e+07	3,266	3.52e+08
Size	14.6553	14.6636	1.7849	8.0913	19.6790
LEV	0.7373	1.2276	3.0730	–19.5617	39.0320
Grow	0.0032	0.0146	0.6570	–2.6167	8.5745
Loss	0	0.3275	0.4695	0	1
Big4	0	0.2620	0.4399	0	1
COVID	0	0.3439	0.4752	0	1

Note: The table shows STATA (version 15.0) output results.
ARL, audit report lag; ARLD, Audit report lag in days; Big4, Big Four audit firms; CAR, cumulative abnormal return; COVID-19, coronavirus disease 2019; Grow, sales growth; IDR, Indonesian Rupiah LEV, leverage; UE, unexpected earnings.

Audit report lag in days (ARLD) has a mean value of 97 days, indicating that, on average, an auditor takes 97 days to issue an audit report for all observations. The minimum number of days for auditors to issue the audit report is 29, and the maximum is 330 days for all observations in 2018–2020. Specifically, in 2020, the mean and maximum numbers of days taken byauditors to issue audit reports were 106 days and 272 days, respectively, while in 2018–2019, the same were 92 days and 330 days, respectively. The mean ARLD for 2020 was higher than the ARLD for 2018 and 2019 (pre-COVID-19). We suspect that it was due to the COVID-19 pandemic in 2020

that auditors needed more time and more audit efforts to collect appropriate and sufficient evidence, considering the health protocol regulations due to the spread of COVID-19. The OJK extended the deadline in the COVID-19 pandemic era to 150 days for 2020 (OJK, 2020). Assets is the total number of assets (in millions of Indonesian Rupiah [IDR], symbolRp) in the observations of the study sample, with a mean of Rp 9,975,840 million. The sample has a minimum value of Rp 3,266 million for the smallest company and Rp 352,000,000 million for the largest company. The mean, minimum and maximum for the other variables can be seen in Table 2.

Correlation analysis

In Table 3, the results of the correlation analysis with pairwise correlation show that UE positively correlates with CAR ($\rho = 0.0543$), which

Table 3. Correlation analysis

Variable	CAR	UE	ARL	Size	LEV	Grow	Loss	Big4	COVID
CAR	1.0000								
UE	0.0543* 0.0899	1.0000							
ARL	0.1092*** 0.0006	0.0069 0.8289	1.0000						
Size	–0.0122 0.7038	0.0054 0.8671	0.2038*** –0.0000	1.0000					
LEV	–0.0579* 0.0705	0.0111 –0.7300	0.0088 –0.7846	0.0001	0.1278***	1.0000			
Grow	0.0341 0.2865	0.1252*** –0.0001	0.0143 –0.6543	0.0479 0.1350	–0.0113 0.7243	1.0000			
Loss	–0.0147 0.6457	0.0328 0.3050	0.3111*** 0.0000	–0.2570*** 0.0000	0.1117*** 0.0005	–0.0989*** 0.0020	1.0000		
Big4	0.0534* 0.0956	0.0127 0.6924	0.1474*** –0.0000	0.4159*** 0.0000	0.0438 0.1718	0.0186 0.5614	–0.1282*** 0.0001	1.0000	
COVID	–0.2058*** 0.0000	0.1738*** 0.0000	0.1896*** 0.0000	0.0054 0.8653	0.0307 0.3375	–0.2018*** 0.0000	0.1651*** 0.0000	0.0345 –0.2813	1.0000

Notes: *** and * denote significant results at 1% and 10% levels, respectively.
The table shows STATA (version 15.0) output results.
ARL, audit report lag; Big4, Big Four audit firms; CAR, cumulative abnormal return; COVID-19, coronavirus disease 2019; Grow, sales growth; LEV, leverage; UE, unexpected earnings.

is significant at the 10% level. ARL positively correlates with CAR and is significant at the 1% level. The control variable LEV has a negative correlation with CAR at the 10% level, and LEV also has a positive correlation at the 1% level with Size. Meanwhile, the variable Big4 positively correlates with CAR at 10%. Big4 also has a negative correlation with ARL and Loss and a positive correlation with Size, significant at the 1% level. COVID negatively correlates with the significant variable CAR at the 1% level. COVID also has a positive and significant correlation at the 1% level with UE, ARL and Loss and a negative correlation with the variable Grow. Other variables do not appear to correlate with the other independent variables in the empirical model.

Hypothesis H1 testing results

We performed preliminary tests to meet the classical assumption of best-unbiased estimators and model specifications concerning the regression models used. Our preliminary tests passed the required assumptions to proceed with the hypothesis testing for Models 1 and 2. Table 4 presents the results of hypothesis testing for empirical Model 1, and Table 5 reports the results for empirical Model 2 with 977 firm-year observations as our full sample.

Hypothesis H1 testing was carried out to test whether the timeliness of audit reports has a negative effect on the market reaction. Table 4 summarises the regression results of testing Hypothesis H1, along with robust standard errors. These results indicate that the main variable of our concern, namely UE*ARL, has a coefficient of –5.28, not significant at 10% (t-test= –1.26, probability = 0.206 > 10%) with a two-tailed test. These results indicate that the timeliness of audit reports (ARL) does not affect the market reaction measured by the ERC. Thus, we conclude that Hypothesis H1 is rejected because there is no significant difference in the market reaction towards the audit report timeliness (ARL).

Using the 2018–2020 observations as our full sample, our results are in line with the results of previous studies by Dewi et al. (2019), Lestari and Nuryatno (2018), Dwiyani et al. (2017) and Diputra and Anna (2014). These

studies found no evidence of a market reaction towards ARL. However, our results are not in line with the findings of Girsang et al. (2017), Herdiana (2017), Handoko and Sudarno (2015), Paramita (2014), Shulthoni (2013) and Syafruddin (2006). In several test results of control variables, among others, LEV has a negative effect on the market reaction (*t*-test = –2.50, probability = 0.013), significant at the 5% level. However, Size, Grow, Loss and Big4 are insignificant in our 2018–2020 observation period.

Table 4. Hypothesis H1 testing result

Model 1

Independent variable	Dependent variable: CAR			
	Prediction	Coefficient	*t*-test	Probability
Constant	?	19.27***	5.32	0.000
UE	+	15.36	0.50	0.616
UE*ARL	–	–5.28	–1.26	0.206
UE*Size	+	0.77	0.75	0.455
UE*LEV	–	–0.24	–1.45	0.148
UE*Grow	+	0.63	0.97	0.333
UE*Loss	–	3.84	0.85	0.394
UE*Big4	+	14.71	0.82	0.411
ARL	–	–2.84***	–4.85	0.000
Size	+	–0.26**	–1.97	0.049
LEV	–	–0.16**	–2.50	0.013
Grow	+	0.67	1.56	0.120
Loss	–	0.32	0.52	0.604
Big4	+	1.12	1.42	0.157
F-value		3.88		
Probability > *F*		0.0000		
R-squared		0.0351		
Adjusted *R*-squared		0.0220		
n		977		

Notes: *** and ** denote significant results at 1% and 5% levels, respectively, with two-tailed tests.
The table shows STATA (version 15.0) output results.
ARL, audit report lag; Big4, Big Four audit firms; CAR, cumulative abnormal return; Grow, sales growth; LEV, leverage; UE, unexpected earnings.

Based on these results, we conclude that, for capital market players, differences in the number of days taken for submitting audit reports are not very relevant and do not affect stock price fluctuations (e.g. Dewi et al.,

2019; Dwiyani et al., 2017; Lestari & Nuryatno, 2018). Another alternative explanation is that the delay in submitting the audited financial statements by the auditor is not too long in relation to the expected deadline, so the market and users of financial statements can still tolerate it. Furthermore, the capital market player has also realised that a regulation regarding late submission of audited financial reports, which brings consequences to the listed firms in the form of warning letters from the OJK and being subjected to sanctions in the form of fines, is not in place. Therefore, the market is not concerned about the delay of audited financial statements.

Table 5. Hypothesis H2 testing result

Model 2

Independent variable	Dependent variable: CAR			
	Prediction	Coefficient	*t*-test	Probability
Constant	?	21.35***	4.66	0.000
UE	+	150.17*	1.84	0.067
UE*ARL	–	–33.44*	–1.88	0.060
UE*ARL*COVID	–	36.60*	1.69	0.092
UE*COVID	–	–184.07*	–1.76	0.079
ARL*COVID	–	2.61***	2.88	0.004
UE*Size	+	1.29	1.08	0.279
UE*LEV	–	–0.47	–1.48	0.139
UE*Grow	+	2.33	1.35	0.178
UE*Loss	–	3.07	0.73	0.466
UE*Big4	+	17.34	1.26	0.208
ARL	–	–3.16***	–3.62	0.000
COVID	–	–15.85***	–3.79	0.000
Size	+	–0.22*	–1.69	0.090
LEV	–	–0.01	–0.12	0.907
Grow	+	–0.03	–0.07	0.943
Loss	–	0.54	0.88	0.380
Big4	+	0.85	1.08	0.279
F-value		5.48		
Probability > *F*		0.0000		
R-squared		0.0933		
Adjusted *R*-squared		0.0772		
n		977		

Notes: *** and * denote significant results at 1% and 10% levels, respectively, with two-tailed tests.
The table shows STATA output results.
ARL, audit report lag; Big4, Big Four audit firms; CAR, cumulative abnormal return; COVID-19, coronavirus disease 2019; Grow, sales growth; LEV, leverage; UE, unexpected earnings.

Hypothesis H2 testing results

Hypothesis H2 testing was carried out to test whether ARL has an increasingly negative influence on the market reactions in the COVID-19 pandemic era. Table 5 summarises the regression results with robust standard errors that have met the requirements to test the hypothesis.

The main variable of concern in Model 1 is UE*ARL*COVID, which has a coefficient of 36.60 and a significance level of 0.092 with a two-tailed test. The result shows that the market reacted more positively to ARL in the COVID-19 era at 10% (probability = 0.092 < 0.10) than in the pre-COVID-19 period. In other words, the positive incremental information provided by capital market players is reflected in the ERC of the EU*ARL*COVID interaction variable. These results are different from the expectations of Hypothesis H2. Thus, Hypothesis H2 is rejected because it is not in line with the initial prediction, whereby ARL has a positive influence on the market reactions in the COVID-19 era. Finally, the test results of control variables show that all control variables, such as LEV, Grow, Size, Loss and Big4, were insignificant at the 10% level towards the market reaction, indicating that these interaction variables are not significant.

Based on the test results above, we conclude that the market reacted positively to the delay in audited financial reports in the 2020 COVID-19 pandemic era in Indonesia. The results of our study may indicate that the market understands the situation and conditions of the COVID-19 pandemic, which affects all aspects of life, including the timeliness of submitting audited financial statements. Therefore, the market participants may tolerate auditors requiring more audit efforts and a longer period during a pandemic to issue independent audit reports than in normal conditions. Our results align with the findings of Wijasari and Wirajaya (2021), who reported a significant difference in audit delay before the pandemic and in the COVID-19 pandemic era. The audit delay during the COVID-19 pandemic is greater than in the era before the pandemic. More audit efforts are needed because there are limitations in obtaining audit evidence due to a series of health protocols and social distancing rules. The COVID-19 condition in 2020 implies that the market can be more tolerant of time extensions for submitting audited financial statements so that the market reacts positively to the delays of audited financial statements.

Conclusion, Limitations and Suggestions

Conclusion

This study finds no significant difference in the association between the audit report timeliness and the market reaction measured by the ERC using a full sample from 2018 to 2020. Therefore, our results indicate that the market does not react to the timely submission of audited financial statements, or there is no significant difference in the market reaction whether auditors submit audited financial statements timely or not. These results are consistent with the results of previous studies, for example Dewi et al. (2019), Lestari and Nuryatno (2018) and Dwiyani et al. (2017).

However, our study finds weak evidence that the market reacted more positively to the audit report timeliness during Indonesia's COVID-19 pandemic in 2020 than in the pre-COVID-19 period (2018–2019). The results show that the market tolerates the conditions during the pandemic where auditors need more audit efforts to obtain sufficient and appropriate evidence to publish audited financial reports. Our study implies that the market assesses information content from the submission date of audited financial statements due to the company's sustainable performance and the quality of audited financial reports, which comprise very important information for capital market players, especially during the COVID-19 pandemic.

Limitations and suggestions

This study has some limitations. First, this study's CAR calculation is suspected of containing market error data on individual stock price indexes in 2018, affecting the study results. The trade war between the United States and its counterparts had made the world financial markets chaotic, thus affecting the statistical data on the stock transactions in Indonesia. Second, the observation period for the COVID-19 pandemic is only 1 year, namely 2020, which could also affect and coincide with the study results, compared to observations of the pre-COVID-19 years. Future studies may consider these limitations.

Endnotes

[1] This study uses the terminology of 'audit report timeliness' interchangeably with other terms that have the same meaning, i.e. audit report lag (ARL) or audit delay.

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