



Strategic Dividend Policy Adaptation and Stock Market Reactions in State-Owned Enterprises Across Crises

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Abstract

This study investigates the strategic adaptation of dividend policy in Indonesian state-owned enterprises across the pre-crisis, crisis, and recovery phases. Adaptation is operationally defined as firm-level, measurable changes in cash dividend indicators during the crisis and post-crisis phases relative to the pre-crisis average. Empirically, dividend behavior is estimated using a dynamic panel framework with system GMM, and an event-study approach evaluates abnormal returns and cumulative abnormal returns around dividend announcement dates in each phase. The results indicate that SOEs increased dividends during the crisis relative to pre- and post-crisis periods, and that the market exhibited stronger positive reactions in the crisis and recovery phases than in the pre-crisis phase. These patterns suggest adaptive choices consistent with managing uncertainty and reinforcing policy credibility within Indonesia's state-ownership setting. The findings highlight the strategic role of dividend signals in shaping investor perceptions during economic shocks, while theoretically challenging the core cash-conservation premise of the pecking order and reinforcing the relevance of signaling theory for state-controlled firms with complex fiscal and political mandates.

Keywords:

Dividend Policy;
Indonesian State-Owned Enterprises;
COVID-19 Crisis;
Pecking Order Theory;
Dividend Signaling Theory.

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1- Introduction

Global capital markets underwent severe dislocations during the COVID-19 pandemic-related crisis, a pattern widely documented in [1-3], and likewise observed in Indonesia's equity market as noted in [4-6]. In Indonesia, the shock manifested through a constellation of macroeconomic disturbances, including a contraction in Gross Domestic Product (GDP) growth [7, 8], weakened household purchasing power, rising unemployment, muted inflation, and heightened investment uncertainty, all of which collectively eroded firms' liquidity positions [7-10]. These macro pressures were compounded by adverse investor sentiment, which amplified domestic stock market volatility [4]. In response, corporations were compelled to recalibrate key financial policies, with dividend policy being especially sensitive to shifts

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in macroeconomic conditions [11, 12]. Within this setting, adjustments to dividend policy function not only as cash distribution choices but also as deliberate market signals aimed at sustaining investor confidence and supporting stock price stability [13].

For Indonesian State-Owned Enterprises (SOEs), dividend policy is inherently intricate because these firms serve a dual mandate in national economic development [14]. Unlike purely private corporations, SOEs are expected to generate profits while also providing fiscal transfers to the state budget and supporting macroeconomic stability through their operations [15, 16]. As a result, dividend choices in SOEs embody socio-political considerations that extend beyond conventional performance metrics [17, 18]. The state's controlling ownership further conditions these outcomes, since higher payout ratios are often deployed as a governance instrument to curb agency frictions between the government as principal and managers as agents, thereby operating as an indirect monitoring device against opportunistic behavior [19, 20]. Within this environment, dividend policy in Indonesian SOEs assumes a strategic role that surpasses its narrow financial function. Decisions are influenced by pressures from pivotal stakeholders, including the government, parliament, and the broader public, each holding distinct preferences regarding the economic and social remit of SOEs [18, 21]. While the state, as majority shareholder, frequently favors elevated dividends to bolster fiscal revenues, SOE executives must reconcile this incentive with the need to retain earnings to fund investment, preserve liquidity, and sustain resilience amid heightened uncertainty [15, 22, 23]. Accordingly, dividend policy in this setting embodies not only economic objectives but also deliberate trade-offs that recognize intersecting political, fiscal, and social mandates embedded in the SOE framework [24, 25].

From a theoretical standpoint, dividend adjustments during periods of crisis can be interpreted through two interacting channels in the context of Indonesian SOEs. The first is a liquidity preservation channel, consistent with the pecking order, whereby heightened uncertainty and rising external financing costs prompt firms to reduce or defer dividends in order to safeguard internal cash holdings [21, 26, 27]. The second is a signaling channel, emphasized by signaling theory, in which greater information asymmetry and market volatility elevate the credibility and value of dividends as indicators of cash flow strength and longer-term prospects [28, 29]. In SOEs, these channels do not operate in isolation; they are conditioned by public policy mandates that may strengthen incentives to maintain or even increase dividends as both a signal of stability and a governance device [14-18, 25]. Accordingly, the tension between liquidity conservation and signaling is not treated as a strict dichotomy but as an equilibrium outcome shaped by crisis intensity, balance sheet robustness, and the influence exerted by the controlling shareholder. This framework motivates our empirical inquiry into whether SOE dividend adjustments during crisis episodes align more closely with the dominance of the pecking order channel or the signaling channel.

Furthermore, when economic conditions are characterized by elevated market volatility and pervasive informational uncertainty, capital markets become especially responsive to corporate policy signals, most notably those related to dividend distributions [30, 31]. Under severe macroeconomic stress and heightened investment risk, investors frequently interpret dividend announcements as immediate reflections of firm fundamentals, encompassing financial soundness, internal liquidity, and the capacity to withstand downturns [32]. This dynamic is particularly salient for Indonesian state-owned enterprises (SOEs), where ownership structure and developmental mandates lead market participants to view dividend policy as an indirect indicator of government stance and broader macroeconomic stability [33, 34]. Accordingly, SOE dividend announcements during crisis periods embody more than routine managerial choices; they also shape investor expectations and influence stock price volatility [13]. Building on this reasoning, an empirical question emerges as to whether the stock market responded to dividend announcements of Indonesian SOEs issued during the COVID-19 crisis.

A growing body of empirical literature has examined how firms adjusted dividends during the COVID-19 crisis across jurisdictions. Evidence reported by [35-39] indicates that companies in China, Morocco, Poland, Pakistan, and the United States, as well as constituents of major equity indices including EuroStoxx Banks, FTSE 100, Euro Stoxx 50, and the S&P 500, predominantly adopted negative dividend policies, either cutting or suspending payouts throughout the pandemic. On the other hand, Mazur et al. [40] documented a countercyclical pattern among several S&P 500 firms that increased dividends, thereby exhibiting a positive dividend stance despite adverse conditions. Collectively, these findings point to cross-country heterogeneity in dividend behavior, which motivates a closer investigation into how dividend policy is designed and executed in the Indonesian context. Within Indonesia, the pattern also appears mixed. Studies [11, 32] reported that real estate firms and companies classified under sustainable and responsible investment largely pursued dividend reductions. Conversely, [13, 41, 42] showed that manufacturing firms, non-financial corporations, and banking institutions implemented positive dividend adjustments during the crisis period. Notably, Hartono et al. [12] further documented that even real estate firms exhibited a shift toward positive dividend behavior when positively moderated by growth opportunity. Taken together, the Indonesian evidence suggests that dividend policies were not uniform across sectors during the COVID-19 episode, indicating sectoral inconsistency. These observations motivate an assessment of whether SOEs determined their dividend policy during the crisis in ways that reflect sector-specific and institutional considerations.

A growing stream of studies has examined stock market reactions to dividend announcements during crisis periods across countries. In India, [34] documented no significant abnormal returns following dividend declarations during the COVID-19 pandemic, in contrast with the pre-crisis period, which displayed notable return effects and signs of information leakage. In a similar vein, Al-Khasawneh et al. [43] reported that in GCC markets, dividend announcements

during the pandemic were followed by negative price movements, with muted investor responses to dividend increases and less pronounced effects of dividend cuts relative to pre-pandemic norms. By contrast, Prakash & Yogesh [44] found more favorable market responses to dividend announcements on India's stock exchange during the pandemic, particularly within the service sector, consistent with weak-form market efficiency. These cross-country findings likewise reveal inconsistency in market reactions to dividend announcements amid crisis conditions and motivate an inquiry into whether dividend announcements as corporate actions elicited discernible market responses in Indonesia amid the pandemic crisis. Evidence from Indonesia is also mixed. Hartono et al. [31] observed predominantly negative market reactions during the COVID-19 episode, where even dividend increases did not generate significant abnormal returns, pointing to heightened investor pessimism. Conversely, [8, 11] documented positive market responses among non-financial firms and real estate companies. However, Hartono & Raya [45] initially reported no discernible market reaction within manufacturing firms, a conclusion that was subsequently revised in Hartono et al. [13]. Likewise, the evidence in Tinungki et al. [41] was later updated by Tinungki et al. [32] for green investment firms. Therefore, the stock market's reaction to dividend announcements across sectors in Indonesia appears inconsistent, which in turn motivates a focused investigation into whether Indonesian state-owned enterprises' dividend announcements during the crisis elicited distinct market reactions.

Addressing these gaps, this study centers on Indonesian state-owned enterprises (SOEs) and advances three research questions: (i) how SOEs' dividend policy adjustments differ across the pre-crisis, crisis, and post-crisis phases; (ii) how the market responds to SOEs' dividend announcements in each phase; and (iii) the extent to which the predictions of the pecking order and signaling frameworks interact under SOEs' institutional characteristics. To answer these questions, we employ an integrated conceptual framework that combines pecking order and signaling, conditioned by the institutional attributes of Indonesian SOEs. We operationalize this framework through a two-track empirical design: a dynamic panel regression of dividend policy indicators across crisis phases, complemented by a robustness test using robust least squares regression; and an event study that evaluates abnormal returns around dividend announcements, with phase demarcations aligned to the Indonesian capital market literature. This design enables tests of the opposing predictions implied by the liquidity-conservation and signaling channels and permits an assessment of whether crisis conditions and SOES institutional features shift their relative importance.

The core originality of this study lies in its simultaneous integration of pecking order theory and dividend signaling theory to examine how Indonesian State-Owned Enterprises (SOEs) adjusted their dividend policies during economic crises, particularly the COVID-19 pandemic. This research stands as a pioneering academic effort that delves into the unique institutional characteristics of SOEs—defined by their political-economic mandates and social obligations—and how these entities dynamically reconfigure their dividend strategies amid heightened macroeconomic uncertainty. This originality is further reinforced by the application of dynamic panel data regression across multiple crisis periods, enabling a comprehensive understanding of evolving dividend behavior and its direct influence on capital market reactions. Academically, this study seeks to address a significant gap in the literature concerning the strategic interplay between SOE dividend policy and investor responses in the Indonesian stock market, while also offering robust empirical foundations for more adaptive public policy frameworks in crisis-era SOE governance.

Hence, this study contributes along three primary axes. First, it provides firm-level evidence on SOES dividend adjustments across the pre-crisis, crisis, and post-crisis phases, thereby mapping cross-phase dynamics within a state-ownership setting that has been relatively underexplored. Second, it evaluates event-based market reactions to SOES dividend announcements in each phase, offering a market-based assessment that complements accrual-based findings. Third, it tests an integrated framework that combines pecking order and signaling, conditioned by the institutional attributes of SOEs, which enables head-to-head tests of competing predictions under crisis pressure and the influence of a controlling shareholder. Further, the results indicate that SOES dividend policies tended to become more expansionary during the crisis phase relative to the pre- and post-crisis periods. On the market side, SOES dividend announcements during the crisis and recovery phases elicited more positive responses than in the pre-crisis period. Taken together, the evidence aligns more closely with the dominance of the signaling channel than with the cash-conservation prediction of the pecking order in the Indonesian SOE context during the crisis episode, while acknowledging sectoral heterogeneity in the intensity and consistency of reactions.

2- Literatures Review

2-1-Signalling Theory and Pecking Order Theory: Dividend Policy of Indonesian SOEs Across Crisis Periods

In the Indonesian SOE context, political objectives, notably fiscal pressures and public policy mandates, operate as institutional constraints that recalibrate the equilibrium between the two grand theories of dividend policy, namely, pecking order theory and signalling theory. First, the controlling shareholder's fiscal preferences can motivate payouts as quasi-fiscal transfers, so the conventional pecking order prediction to withhold or reduce dividends during crisis episodes does not necessarily materialize [14-18, 25]. Second, the continuation of dividends under stress can amplify the information content of payouts when markets read them as commitments to stability and cash flow capacity, which is reflected in price responses around dividend announcements in Indonesia [13, 31-34]. Third, when dividends function as a governance device to mitigate agency frictions between the state and managers, higher payouts act both as a cash-based disciplining mechanism and as a signal of policy consistency, although the informational effect is conditional on

balance sheet strength and on the policy coherence perceived by investors [19, 20, 25]. Accordingly, political objectives serve as a tilting force that may weaken the pecking order impulse for cash conservation or strengthen the signaling interpretation of dividends, with the resulting equilibrium shaped by the intensity of fiscal pressure, the resilience of liquidity, and prevailing market conditions during the crisis phase under study [13, 31, 32].

2-2-Hypothesis Formulation

The pecking order theory maintains that firms adhere to a hierarchical financing preference, placing retained earnings ahead of external sources such as debt or new equity issuance [26]. During periods of elevated uncertainty and constrained investment opportunities, for example, economic crises, firms are therefore more likely to curtail or suspend dividend payouts in order to conserve internal liquidity [21]. By contrast, the signaling theory of dividends [28] interprets the maintenance of dividends under financial stress as a deliberate, and thus credible, mechanism through which firms communicate their cash flow resilience and stable forward outlook to investors [46]. In settings where viable alternative investments are scarce, dividend distributions may likewise be viewed as a rational allocation of surplus earnings that helps sustain investor confidence [47]. Taken together, these two grand theories provide a comprehensive lens for analyzing dividend policy adaptations and their capital market implications during crisis episodes in Indonesia [32], while clarifying the strategic balance firms must strike between safeguarding liquidity and projecting strength to

During episodes of economic distress, firms typically curtail or even suspend dividend payments to bolster internal liquidity, acting prudently in the face of heightened market uncertainty and shrinking investment opportunities [27, 48]. The theoretical logic is straightforward: crises materially raise liquidity risk, so retaining earnings rather than distributing cash helps prevent the erosion of reserve balances [13, 49]. This expectation is consistent with a wide empirical record, including evidence reported by [13, 32, 35, 39, 50]. Methodologically, many studies mark crisis conditions with a binary indicator that equals 1 during crisis periods and 0 otherwise, thereby enabling systematic comparisons of dividend behavior across economic regimes [8, 32, 51]. Building on this theoretical and empirical base, we posit:

H1: *Firms are more likely to reduce or forgo dividend distributions during crisis periods, as reflected in a negative crisis effect on dividend policy.*

Furthermore, during economic downturns firms typically manage internal cash flows more conservatively by reducing or suspending dividend payments, prioritizing liquidity preservation and limiting dependence on external financing that is costly and often difficult to obtain [41, 45, 52]. This reasoning rests on the view that declines in annual Gross Domestic Product (GDP) growth, employed as a macroeconomic proxy for crisis conditions, place financial pressure on firms and induce more cautious dividend behavior, including potential omissions [51, 53, 54]. Accordingly, theory predicts a positive association between GDP growth and dividend policy: dividend payouts tend to contract when the economy slows and to rise when the economy expands. This proposition is consistent with the empirical evidence reported by [32, 11]. Building on this rationale and prior findings, we state:

H2: *Annual Gross Domestic Product growth positively influences dividend policy.*

Conversely, although most firms withhold or reduce dividend distributions during downturns to safeguard liquidity, some deliberately maintain payouts as a strategic signal of financial resilience and durable long-term prospects [11]. The logic is that crisis conditions heighten investor sensitivity to favorable corporate signals; a consistent dividend announcement under such uncertainty is often read as credible evidence of solid fundamentals, sustained profitability, and prudent liquidity management, differentiating these firms from peers that elect to retain earnings [13, 31, 55]. Implicitly, markets interpret such actions positively, since paying dividends in crisis periods conveys managerial confidence in financial stability and a comparative advantage over firms unable or unwilling to distribute cash [44, 56]. In line with market efficiency theory, dividend news is rapidly impounded into prices, particularly when uncertainty is elevated, thereby serving as a salient information cue regarding a firm's financial condition [32]. This proposition is consistent with prior empirical findings reported by [8, 11, 13, 32, 44, 55]. On this foundation, we state:

H3: *Dividend announcements elicit a positive stock market reaction, as reflected in abnormal returns around the announcement date.*

H4: *Dividend announcements have a positive effect on cumulative abnormal returns within the event window.*

3- Methods

3-1-Design of Research

This study employs a quantitative design aligned with the proposed hypotheses [57, 58]. Hypotheses 1 and 2 assess the causal effects of the predictor variables ECON and GDPG on the response variable dividend policy (DPS) using panel regression models. Hypotheses 3 and 4 evaluate stock market reactions to dividend announcements through an event study, with abnormal return (AR) and cumulative abnormal return (CAR) measured over a ten-day window that

spans five trading days before to five trading days after the announcement date [12, 44, 59]. Secondary data are sourced from the Indonesia Stock Exchange (IDX) and the Bloomberg Terminal. The observation horizon for H1 and H2 covers 2014–2023, while H3 and H4 are examined using data from 2019–2023. Sampling follows a purposive approach. For H1 and H2, the sample comprises Indonesian state- and region-owned enterprises (SOEs/BUMD) that satisfy: (1) continuous listing on the IDX from 2014 to 2023; (2) direct or indirect majority government ownership of at least 50 percent plus one share; (3) at least one dividend distribution during the period; (4) availability of complete audited annual reports; (5) no ownership changes via privatization, mergers, or acquisitions; and (6) complete data for all study variables. These criteria yield 21 firms and 210 firm-year observations.

For H3 and H4, firms are included if: (1) a dividend announcement was issued in the relevant year; (2) the announcement date is clearly identified from reliable sources; (3) daily price data are available for both the estimation and event windows; (4) the stock is actively traded without extended suspension; and (5) no major corporate actions, such as restatements, acquisitions, or stock splits, occur within the event window. The resulting event-study samples consist of 21 firms in 2019, 19 in 2020, 12 in 2021, 16 in 2022, and 17 in 2023. Furthermore, the research methodology workflow is presented in Figure 1. It begins with the articulation of objectives and hypotheses and the definition of the firm population and sample, followed by setting the observation period and inclusion criteria to ensure consistent identification of the pre-crisis, crisis, and recovery phases. Next, financial and market data are collected from trusted sources. We then construct the main and control variables and perform data cleaning, including frequency alignment, treatment of extreme values, and verification of completeness. The subsequent step specifies empirical models consistent with the hypotheses, followed by model estimation and diagnostic checks to ensure the reliability of the results. Robustness tests and alternative specifications are then implemented to assess the stability of the findings. The principal results are presented in tables and interpreted economically by linking dividend policy changes across phases with market responses. The workflow concludes with the development of implications, documentation of limitations, and an agenda for future research, thereby recording the process systematically from planning to policy-relevant outputs.

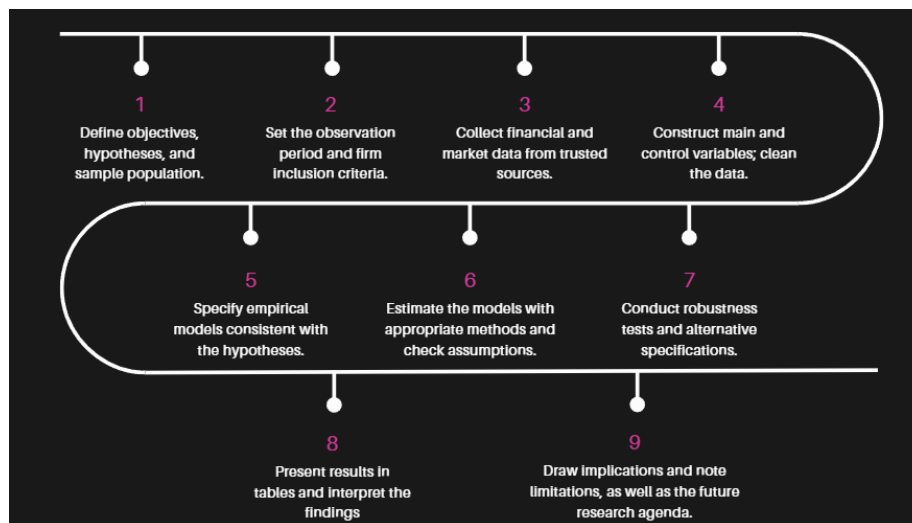


Figure 1. Research Methodology Workflow

3-2- Measurement of Variable

This study investigates the determinants of dividend policy for Hypotheses 1 and 2 by modeling dividend per share (DPS) as the outcome proxy for dividend policy, with economic conditions (ECON) and annual GDP growth (GDPG) as the principal predictor proxies. To enhance robustness, we include control variables commonly employed in the literature [8], namely profitability, leverage, firm size, and prior-year dividends, following [8, 11, 32, 60-64]. ECON is specified as a binary indicator, with crisis years 2020–2021 coded as 1 and non-crisis years 2014–2019 and 2022–2023 coded as 0, in line with [32] and supported by Diab et al. [51]. GDPG is calculated as the percentage change in real GDP relative to the previous year [65–68]. DPS denotes the cash dividend per share [13, 62]. Profitability is proxied by earnings per share (EPS), defined as post-tax net income per share [69, 70]. Leverage is measured by the debt-to-equity ratio (DER) [71, 72]. Firm size is represented by the natural logarithm of total assets [73–75]. To capture the dynamic nature of dividend policy, the lagged dividend per share ($DPS_{i,t-1}$) is included as an instrumental variable, consistent with prior studies [45, 72].

Furthermore, Hypotheses 3 and 4 are evaluated using an event study framework as follows. First, daily stock returns ($R_{i,t}$) are computed as the change in the closing price from day $t-1$ to day t , divided by the closing price on day $t-1$. Second, the daily return on the Indonesian Composite Index (Rm_t), which serves as the expected return ($E(R)_t$), is calculated using the same procedure. Third, abnormal return ($AR_{i,t}$) is obtained by subtracting the expected return from each stock's actual return. Finally, cumulative abnormal return ($CAR_{i,t}$) is derived by summing ($AR_{i,t}$) over the entire event window, from the first through the last day, thereby capturing the aggregated market response to dividend announcements [31, 41, 55].

3-3- Financial Econometric Tools and Empirical Model

To test Hypotheses 1 and 2, the regression analysis is conducted for causal relationship testing [57]. We estimate dynamic panel models using the two-step system Generalized Method of Moments (SYS-GMM), which addresses endogeneity, heteroskedasticity, and simultaneity bias [8, 76, 77]. Model validity and consistency are evaluated with the Sargan test and the Arellano–Bond second-order autocorrelation test; failure to reject at the 5 percent level indicates appropriate instruments and satisfies the consistency requirement. We assess unbiasedness by comparing coefficient estimates across SYS-GMM, LSDV-Robust (LSDVR), and OLS-Robust (OLSR). Following [13, 32], the model is considered unbiased when the δ coefficients meet the ordering LSDVR < SGMM < OLSR, implying that SYS-GMM delivers consistent estimates without systematic bias. The empirical specifications for Hypotheses 1 and 2 are formally stated in Equation 1 as Model 1 and in Equation 2 as Model 2, respectively, as follows:

$$DPS_{i,t} = \beta_0 + \delta DPS_{i,t-1} + \beta_1 ECON_{i,t} + \beta_2 EPS_{i,t} + \beta_3 DER_{i,t} + \beta_4 TA_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$DPS_{i,t} = \beta_0 + \delta DPS_{i,t-1} + \beta_1 GDPG_{i,t} + \beta_2 EPS_{i,t} + \beta_3 DER_{i,t} + \beta_4 TA_{i,t} + \varepsilon_{i,t} \quad (2)$$

Note: $DPS_{i,t}$: the dividend per share of firm i in year t ; $DPS_{i,t-1}$: the lagged dividend per share (year $t-1$) of firm i , utilized as the instrumental variable in the model; $ECON_{i,t}$: the economic condition variable, applied uniformly across all firms (all i) in year t ; $GDPG_{i,t}$: the annual gross domestic product growth, common to all firms (all i) in year t ; $EPS_{i,t}$: earnings per share for firm i in year t ; $DER_{i,t}$: the debt-to-equity ratio of firm i in year t ; $TA_{i,t}$: the total assets of firm i in year t ; β_0 : the intercept term; δ : the coefficient associated with the instrumental variable; $\beta_1, \beta_2, \beta_3, \beta_4$: the coefficients for the primary and control variables; $\varepsilon_{i,t}$: the error term for firm i in year t .

Furthermore, the event study employs one-sample t-tests to assess whether the mean abnormal returns ($AR_{i,t}$) and cumulative abnormal returns ($CAR_{i,t}$) differ significantly from zero. A nonzero mean indicates a market reaction, since the null hypothesis posits an average abnormal return of zero and thus no response to the dividend announcement [32]. All statistical analyses were conducted in STATA version 14.

3-4- Endogeneity Issue and Robustness Checks

Regression-based research is inherently vulnerable to endogeneity among explanatory variables, which can bias coefficients and render them inconsistent [77]. The empirical models for Hypotheses 1 and 2 face the same risk, as documented by [78-81], who show causal interdependence among the regressors. To mitigate this concern, we employ the Generalized Method of Moments (GMM), which delivers consistent, unbiased estimates by explicitly addressing endogeneity [82, 83]. We also implement several robustness procedures [84]. First, economic conditions are proxied in two ways—a binary crisis dummy and GDP growth—to verify consistency across Model 1 (Equation 1) and Model 2 (Equation 2). Second, we conduct sub-period analyses for Hypotheses 1 and 2 by partitioning the full sample (2014–2023) into phase-specific windows: pre-crisis and crisis (2014–2021), as well as pre-crisis, crisis, and post-crisis (2014–2022 and 2014–2023), following [11, 13, 32]. Third, we run a robustness test using Robust Least Squares (RLS) regression, adapting the procedure in [85]. In the RLS implementation, we apply the MM-estimator to handle outliers and heteroskedasticity [86]. Lastly, to evaluate Hypotheses 3 and 4, annual market reaction tests are conducted for each year from 2019 through 2023, capturing conditions before, during, and after the crisis [32].

4- Results

4-1- Descriptive Statistic and Correlation Analysis

Table 1 reports descriptive statistics for the variables used to test Hypotheses 1 and 2. Dividend per Share (DPS), the proxy for dividend policy, has a minimum of zero, indicating that some firms paid no dividends. ECON, the macroeconomic conditions indicator, is binary with 0 denoting non-crisis periods and 1 denoting crisis periods during the COVID-19 episode. The second macro indicator, annual GDP Growth (GDPG), exhibits a negative minimum, indicating instances of economic contraction. Earnings per Share (EPS) also shows negative minima, consistent with loss-making firms. In terms of dispersion, GDPG, Debt-to-Equity Ratio (DER), and Total Assets (TA) display equidispersion characteristics [87], whereas DPS, ECON, and EPS exhibit overdispersion, reflecting variability that exceeds their respective means.

Table 1. Descriptive Statistics for Each Proxy of Variable

Proxy	Average	Std. Dev.	Min.	Max.
DPS	92.592	133.567	0.000	1090.841
ECON	0.200	0.401	0.000	1.000
GDPG	0.042	0.021	-0.021	0.053
EPS	217.995	285.449	-872.301	1109.229
DER	3.461	3.370	0.077	16.079
TA	17.902	1.661	14.889	21.500

Table 2 summarises Pearson correlations for the variables used in testing Hypotheses 1 and 2. EPS shows the strongest positive association with DPS, indicating a substantial direct link. TA is moderately and positively correlated with DPS, whereas the remaining predictors exhibit weak to very weak relationships. Among the predictors, the highest intercorrelations are observed for EPS with TA and for DER with TA, both at moderate positive levels. Other pairwise correlations are low, suggesting that severe multicollinearity is unlikely [88]. In addition, ECON and GDPG are strongly and positively correlated, supporting the robustness of these macro proxies [11, 32, 41]. Because ECON and GDPG are used in separate empirical models, multicollinearity between them is both theoretically and statistically implausible.

Table 2. Pearson Correlation Estimation for Each Proxy of Variable

Proxy	DPS	ECON	GDPG	EPS	DER	TA
DPS	1.000					
ECON	-0.072	1.000				
GDPG	0.119	-0.796	1.000			
EPS	0.788	-0.154	0.183	1.000		
DER	0.033	0.075	-0.062	0.119	1.000	
TA	0.450	0.076	-0.049	0.505	0.590	1.000

4-2-Dividend Policy During Crisis Periods, as well as in Pre- and Post-Crisis Contexts

Table 3 presents the full-sample regression estimates for Hypotheses 1 and 2 under both Model 1 and Model 2, and also reports the sub-period robustness check for Model 1 over 2014–2022. Across the full period, all specification diagnostics are satisfied: the Sargan test is not significant at the 5 percent level, the Arellano–Bond second-order autocorrelation test is likewise not significant, and the instrumental-variable coefficient ordering meets the criterion (LSDVR) < (SGMM) < (OLSR), thereby confirming model validity. The partial tests indicate that in Model 1, ECON exerts a positive effect on dividend policy as proxied by DPS. In Model 2, GDPG exhibits a negative effect on dividend policy as proxied by DPS. Taken together, the ECON and GDPG estimates lead to the rejection of H1 and H2. Contrary to the stated hypotheses, Indonesian state-owned enterprises distributed higher dividends during crisis periods than in the pre- and post-crisis phases according to ECON, a result corroborated by GDPG, whereby firms increased payouts during GDP contraction relative to periods of stronger GDP growth before and after the crisis.

Table 3. System GMM Regression Estimates for the 2014–2023 Period (Model 1 and Model 2) and the 2014–2022 Sub-Period (Model 1 Only)

Proxy	2014 – 2023: Model 1			2014 – 2023: Model 2			2014 – 2022: Model 1		
	LSDVR	SGMM	OLSR	LSDVR	SGMM	OLSR	LSDVR	SGMM	OLSR
$DPS_{i,t-1}$	0.162*** (0.030)	0.165 (0.174)	0.431*** (0.159)	0.160*** (0.032)	0.128*** (0.055)	0.427*** (0.160)	0.318** (0.171)	0.424* (0.286)	0.560*** (0.238)
$ECON_{i,t}$	-3.449 (10.447)	39.342* (27.902)	17.925 (17.298)	-	-	-	14.153* (9.279)	64.308*** (12.416)	26.979* (18.440)
$GDPG_{i,t}$	-	-	-	266.629 (278.846)	-317.674* (219.086)	22.069 (206.636)	-	-	-
$EPS_{i,t}$	0.234*** (0.081)	0.392*** (0.113)	0.238*** (0.066)	0.227*** (0.078)	0.379*** (0.161)	0.232*** (0.066)	0.306*** (0.076)	0.427*** (0.068)	0.273*** (0.077)
$DER_{i,t}$	-2.607 (8.179)	-13.169 (14.560)	-2.627* (1.612)	-1.559 (7.326)	-10.903 (16.923)	-2.663** (1.605)	-13.715 (11.834)	-24.094* (17.315)	-1.633 (1.849)
$TA_{i,t}$	49.194 (39.066)	39.605*** (16.375)	4.532 (8.928)	49.793 (39.905)	42.303** (23.246)	5.521 (8.690)	61.230* (46.154)	46.893* (34.470)	-3.723 (9.475)
β_0	-846.097 (696.684)	-678.67** (300.856)	-73.442 (141.378)	-870.555 (715.084)	-699.708* (520.719)	-86.364 (141.956)	-1057.011 (813.814)	-816.546* (569.778)	-51.050 (149.353)
Obs.	189	189	189	189	189	189	168	168	168
Group	21	21	-	21	21	-	21	21	-
Inst.	-	49	-	-	49	-	-	40	-
Wald χ^2	-	165.96***	-	-	83.14***	-	-	83.26***	-
F	53.76***	-	64.60***	52.26***	-	65.97***	9.16***	-	54.09***
Adj. R^2	0.547	-	0.713	0.536	-	0.710	0.612	-	0.755
Sargan χ^2	-	20.221	-	-	18.314	-	-	16.644	-
AR(1)	-	-1.380	-	-	-1.594	-	-	-1.344	-
AR(2)	-	-0.999	-	-	-0.986	-	-	-0.147	-

Note: For each regression model, the upper values represent estimated coefficients, and the values in parentheses below are WC-Robust Standard Errors for SGMM and Robust Standard Errors for LSDVR and OLSR. Statistical significance is denoted by (***) at the 0.01 level, (**) at the 0.05 level, and (*) at the 0.10 level. Partial tests are based on a one-tailed approach.

Table 4 reports the sub-period robustness checks for 2014–2022 under Model 2. For this window, the specification diagnostics for both Model 1 and Model 2, as summarized in Table 3, confirm valid estimation: the Sargan test and the Arellano–Bond second-order autocorrelation test are nonsignificant at the 5 percent level, and the unbiasedness criterion is satisfied, indicating reliable coefficients. The parameter estimates show that in Model 1, ECON has a positive effect on dividend policy as proxied by DPS, whereas in Model 2, GDPG exhibits a negative effect on DPS. Consistent with the full-period analysis, these results lead to the rejection of H1 and H2. Table 4 also provides the 2014–2021 sub-period estimates for Models 1 and 2. Although the Sargan and Arellano–Bond tests again support correct specification at the 5 percent level, the bias ordering does not hold, with the δ comparison yielding $SGMM < LSDVR < OLSR$. Prior studies nevertheless consider SGMM reliable in such circumstances [32, 89, 90], given that SGMM addresses limitations of first-difference GMM by establishing equivalence between the original and transformed systems and enabling simultaneous estimation [76, 91]. In this sub-period, the parameter estimates likewise indicate a positive effect of ECON and a negative effect of GDPG on DPS; accordingly, the ECON and GDPG estimates for 2014–2021 are treated as robust, and H1 and H2 are again rejected. The concordance across models and sub-periods corroborates the robustness of the findings relative to both the full-period and the 2014–2022 estimations.

Table 4. System GMM Regression Estimates for the 2014–2022 Sub-Period (Model 2 Only) and the 2014–2021 Sub-Period (Model 1 and Model 2)

Proxy	2014 – 2022: Model 2			2014 – 2021: Model 1			2014 – 2021: Model 2		
	LSDVR	SGMM	OLSR	LSDVR	SGMM	OLSR	LSDVR	SGMM	OLSR
$DPS_{i,t-1}$	0.308** (0.165)	0.316 (0.258)	0.556** (0.245)	-0.201 (0.243)	-0.282 (0.532)	0.295** (0.140)	-0.222 (0.236)	-0.406 (0.511)	0.279** (0.152)
$ECON_{i,t}$	-	-	-	13.413* (9.460)	29.689*** (12.581)	27.849* (18.557)	-	-	-
$GDPG_{i,t}$	7.056 (108.798)	-692.144*** (523.114)	-85.168* (235.308)	-	-	-	-2.391 (172.597)	-87.517* (61.372)	-173.448 (214.081)
$EPS_{i,t}$	0.297*** (0.071)	0.411*** (0.116)	0.263*** (0.079)	0.247*** (0.055)	0.318*** (0.098)	0.271*** (0.079)	0.239*** (0.054)	0.230** (0.139)	0.264*** (0.080)
$DER_{i,t}$	-11.406 (10.697)	-17.626 (14.738)	-1.679 (1.873)	-9.756* (6.678)	-20.575 (34.164)	-3.102** (1.369)	-7.453 (5.935)	-19.207 (35.912)	-3.210** (1.407)
$TA_{i,t}$	65.782* (49.011)	49.796** (29.157)	-2.182 (9.197)	12.892 (22.054)	47.663 (48.382)	3.860 (4.857)	19.154 (22.467)	52.858* (40.219)	5.654 (4.421)
β_0	-1139.964 (870.036)	-822.646* (504.785)	-36.312 (148.611)	-155.296 (363.619)	-752.405 (702.199)	-65.309 (77.681)	-267.816 (379.115)	-820.075* (548.799)	-79.646 (75.621)
Obs.	168	168	168	147	147	147	147	147	147
Group	21	21	-	21	21	-	21	21	-
Inst.	-	40	-	-	32	-	-	32	-
Wald χ^2	-	89.11***	-	-	59.63***	-	-	119.70***	-
F	9.45***	-	53.27***	8.26***	-	74.01***	9.56***	-	57.444***
Adj. R^2	0.586	-	0.748	0.553	-	0.729	0.574	-	0.718
Sargan χ^2	-	16.618	-	-	18.988	-	-	16.458	-
AR(1)	-	-1.235	-	-	-1.048	-	-	-1.405	-
AR(2)	-	-0.073	-	-	-0.145	-	-	-0.298	-

Note: For each regression model, the upper values represent estimated coefficients, and the values in parentheses below are WC-Robust Standard Errors for SGMM and Robust Standard Errors for LSDVR and OLSR. Statistical significance is denoted by (***) at the 0.01 level, (**) at the 0.05 level, and (*) at the 0.10 level. Partial tests are based on a one-tailed approach.

Furthermore, to verify the robustness of the dynamic panel SYS-GMM estimates, we implemented a Robust Least Squares regression using the MM-estimator (RLS-MM) [58, 85], as reported in Table 5. Across Model 1 and Model 2, for the main period 2014–2023 and the sub-periods 2014–2022 and 2014–2021, the joint significance statistic Rn^2 is significant at the 0.01 level, indicating simultaneous explanatory power. The adjusted Rw^2 coefficients, interpreted as coefficients of determination, show predictor variability explained in Model 1 of 0.884 for 2014–2023, 0.895 for 2014–2022, and 0.894 for 2014–2021. Moreover, for Model 2 the adjusted Rw^2 values are 0.884 for 2014–2023, 0.894 for 2014–2022, and 0.894 for 2014–2021. Consistently across the main period and both sub-periods, the RLS-MM estimates indicate that ECON has a positive effect on dividend policy in Model 1, while GDPG has a negative effect on dividend policy in Model 2. Taken together, the RLS-MM robustness tests support the stability of all dynamic panel regression results for both Model 1 and Model 2 over 2014–2023 as well as the 2014–2022 and 2014–2021 sub-periods.

Table 5. Estimates from Robust Least Squares Regression with MM Estimator

Proxy	Model 1			Model 2		
	2014–2023	2014–2022	2014–2021	2014–2023	2014–2022	2014–2021
$ECON_{i,t}$	2.026* (1.552)	4.283** (2.534)	4.782** (2.494)	-	-	-
$GDPG_{i,t}$	-	-	-	-30.188* (20.207)	-62.706** (35.077)	-72.988*** (30.619)
$EPS_{i,t}$	0.293*** (0.011)	0.297*** (0.011)	0.289*** (0.012)	0.293*** (0.011)	0.297*** (0.011)	0.288*** (0.012)
$DER_{i,t}$	-4.247*** (0.929)	-4.122*** (0.926)	-3.999*** (0.974)	-4.244*** (0.928)	-4.109*** (0.927)	-3.977*** (0.975)
$TA_{i,t}$	12.511*** (2.194)	11.196*** (2.217)	10.661*** (2.217)	12.524*** (2.190)	11.211*** (2.212)	10.665*** (2.310)
β_0	-195.929*** (36.058)	-176.105*** (36.238)	-167.230*** (37.719)	-194.446*** (37.176)	-172.830*** (37.483)	-163.234*** (39.083)
Obs.	210	189	168	210	189	168
Rn^2	1465.541***	1362.259***	1099.546***	1463.662***	1354.974***	1092.773***
Adj. Rw^2	0.884	0.895	0.894	0.884	0.894	0.894

Note: For each regression model, the upper values represent estimated coefficients, and the values in parentheses below are standard errors. Statistical significance is denoted by (***) at the 0.01 level, (**) at the 0.05 level, and (*) at the 0.10 level. Partial tests are based on a one-tailed approach.

4-3- Stock Market Reaction to Dividend Announcements During Crisis Periods, as well as in Pre- and Post-Crisis Contexts

Results for the market reaction test using the event study method based on abnormal returns (AR) are reported in Table 6. In 2019 pre-crisis, a significant positive reaction appears only on day T+1, supporting H1 for that day, while significant negative reactions occur on T-5, T-4, and T+2, with no effects on the remaining days. In 2020 during the crisis, significant positive AR is detected on T-4 and T-2, confirming H3 for those dates, and no other days exhibit a significant response. In 2021, also within the crisis phase, a positive reaction is observed on T-1, supporting H3, whereas negative reactions arise on T-4 and on T, the announcement day; other event days show no reaction. In 2022 post-crisis, positive AR is recorded on T-3, T-2, and T+3, confirming H3 for those days, alongside a negative reaction on T+2 and null results elsewhere. Finally, in 2023 post-crisis, positive market reactions are evident on T-3, T, and T+1, supporting H3 for those dates, with a negative reaction on T-2.

Table 6. Market Reaction Estimates (2019–2023) Based on Abnormal Return (AR)

Day	2019		2020		2021		2022		2023	
	AAR	t	AAR	t	AAR	t	AAR	t	AAR	t
T-5	-0.007	-1.592*	0.012	1.055	-0.000	-0.083	0.003	0.582	-0.003	-0.635
T-4	-0.005	-1.334*	0.009	1.463*	-0.008	-1.584*	-0.003	-0.553	0.002	0.494
T-3	-0.002	-0.399	-0.005	-0.577	-0.004	-0.762	0.007	1.873**	0.006	1.503*
T-2	0.005	1.103	0.010	1.663*	0.002	0.257	0.010	1.688*	-0.005	-2.916***
T-1	0.001	0.286	0.006	0.842	0.021	3.313***	0.008	1.486*	0.007	1.097
T	0.000	0.026	0.012	0.949	-0.008	-1.743*	0.006	1.137	0.007	1.498*
T+1	0.008	1.485*	0.008	1.138	0.001	0.087	0.003	0.373	0.008	1.407*
T+2	-0.016	-5.355***	-0.001	-0.150	0.001	0.137	-0.006	-2.063**	-0.003	-0.973
T+3	0.003	0.662	-0.001	-0.113	-0.006	-1.136	0.008	1.799**	0.004	0.846
T+4	-0.002	-0.540	-0.002	-0.345	0.001	0.429	-0.002	-0.557	0.000	0.053
T+5	-0.003	-0.6225	-0.002	-0.391	-0.003	-0.708	0.002	0.457	0.003	0.745

Note: The t-values from the one-sample t-tests are based on degrees of freedom of 20 (2019), 18 (2020), 11 (2021), 15 (2022), and 16 (2023). Statistical significance is denoted by (***) at the 0.01 level, (**) at the 0.05 level, and (*) at the 0.10 level, based on a one-tailed test.

Additionally, the parameter estimates from the event study using cumulative abnormal returns (CAR) are reported in Table 7. For 2019 pre-crisis, no significant positive market reaction to dividend announcements is detected across the window, so H4 is rejected for that year; significant negative reactions occur on T-5 through T-3, with no effects on other days. Turning to 2020, during the crisis, significant positive CAR is observed on T-4, T-2, T-1, T (announcement day), and T+1 to T+5, thereby supporting H4 on those dates, while no reaction appears on T-5 and T-3. In 2021, also within the crisis phase, the pattern mirrors 2019, with no positive responses over the entire window and H4 again rejected; a single significant negative reaction arises on T-3, with null results elsewhere. In 2022 post-crisis, significant positive CAR materializes on T-1, T, and T+1 through T+5, confirming H4 for those days, whereas no reaction is found from T-5 to T-2. Finally, in 2023 post-crisis, positive responses emerge on T+1, T+3, T+4, and T+5, validating H4 for those dates, and the remaining days show no significant reaction.

Table 7. Market Reaction Estimates (2019–2023) Based on Cumulative Abnormal Return (CAR)

Day	2019		2020		2021		2022		2023	
	CAAR	t	CAAR	t	CAAR	t	CAAR	t	CAAR	t
T-5	-0.007	-1.592*	0.012	1.055	-0.000	-0.083	0.003	0.582	-0.003	-0.635
T-4	-0.012	-1.916**	0.021	2.180**	-0.009	-1.319	0.000	0.090	-0.001	-0.094
T-3	-0.014	-1.567*	0.016	1.246	-0.123	-1.396*	0.007	1.153	0.005	0.647
T-2	-0.009	-1.075	0.026	2.207**	-0.011	-0.905	0.018	2.218	0.000	0.008
T-1	-0.005	-0.684	0.032	2.472**	0.010	0.678	0.026	2.687***	0.007	0.569
T	-0.008	-0.712	0.045	2.043**	0.002	0.172	0.032	2.861***	0.013	1.172
T+1	0.000	0.008	0.053	2.395**	0.003	0.172	0.035	2.838***	0.021	1.524*
T+2	-0.016	-1.284	0.052	2.128**	0.004	0.320	0.029	2.378**	0.018	1.151
T+3	-0.013	-0.867	0.052	2.086**	-0.002	-0.132	0.037	2.922***	0.022	1.439*
T+4	-0.014	-0.959	0.050	1.957**	-0.000	-0.017	0.034	2.620***	0.022	1.360*
T+5	-0.018	-1.043	0.048	1.940**	-0.003	-0.172	0.036	2.637***	0.025	1.460*

Note: The t-values from the one-sample t-tests are based on degrees of freedom of 20 (2019), 18 (2020), 11 (2021), 15 (2022), and 16 (2023). Statistical significance is denoted by (***) at the 0.01 level, (**) at the 0.05 level, and (*) at the 0.10 level, based on a one-tailed test.

5- Discussion

Our findings indicate that Hypotheses 1 and 2 are rejected, as Indonesian SOEs unexpectedly increased dividend payouts during the crisis period. This result is striking given the conventional tendency of firms to cut or suspend dividends amid economic downturns [11, 32]. Theoretically, the pattern aligns with signaling theory, which posits that maintaining or raising dividends functions as a credible positive indicator of a firm's financial prospects [13, 41]. Empirically, crisis-period dividend increases are consistent with prior evidence [40]: documents a subset of S&P 500 companies in the United States that acted countercyclically by raising dividends during the pandemic; similar tendencies are reported by Santosa et al. [42] for Indonesian banks and by Hartono et al. [13] for manufacturing firms, while [8] notes higher payout propensities among Indonesian listed companies during episodes of turbulence. By contrast, many other jurisdictions observed the opposite pattern, with a majority of firms reducing or deferring dividends during COVID-19, including in China [35], Pakistan [37], and the United States [38]. The result also stands in tension with [32], which reports that Indonesian green investment firms did not increase dividend levels in the post-crisis period. Taken together, the evidence challenges the standard view yet supports the contention that, in specific institutional settings, firms can deploy dividend policy strategically to convey optimism to the market during crises.

One salient explanation for the increase in SOE dividends during the crisis lies in the government's dominant role as controlling shareholder. Indonesian SOEs carry a dual mandate: beyond pursuing corporate profitability, they serve as instruments of economic development and as contributors to the state's fiscal capacity. As a result, SOE dividend decisions are frequently shaped by socio-political considerations that extend beyond pure business logic and contemporaneous financial performance [92]. The state, as majority owner, has strong incentives to encourage higher cash distributions not only to bolster public revenues but also to deploy dividends as a governance device for disciplining management [20]. This practice accords with agency theory, whereby paying out earnings as dividends reduces free cash flow available for potential managerial discretion, thereby dampening principal-agent conflicts [93]. Empirically, a propensity for relatively large payouts among SOEs has long been observed: for example, over 2005–2009 the average dividend payout ratio of SOEs was 34.65 percent, markedly above the 24.65 percent average among non-SOE LQ45 firms [20, 92]. Against this backdrop, it is unsurprising that even amid crisis conditions, pressures to maintain or raise dividend distributions remain pronounced within the SOE environment.

A further lens on SOEs' pro-dividend stance during crises is the government's fiscal imperative. Economic shocks such as the COVID-19 pandemic compress tax revenues and widen budget deficits, prompting SOE dividends to be mobilized as an additional funding source for the state budget. As the controlling shareholder, the government can explicitly direct SOEs to distribute a larger share of earnings to help bridge fiscal shortfalls, effectively turning dividends into a quasi-fiscal instrument. This practice is reflected in the dividend-setting process, where the Ministry of Finance reportedly assigns annual dividend targets to individual SOEs [94], targets that tend to be raised during crisis periods to ease budgetary pressures. The phenomenon of "political dividends" is also consistent with political budget cycle dynamics, whereby in the run-up to elections or amid expanded public spending, the state pushes for extra distributions from SOEs as part of its broader fiscal-political agenda. Consequently, the observed increases in SOE dividends during the crisis need not be explained solely by market signaling considerations; they are equally attributable to the state's pursuit of additional fiscal liquidity [20, 92]. This explanation complements the signaling-based interpretation of our results rather than substituting for it.

A direct implication of such “political dividends” is the potential distortion of conventional corporate finance logic. Under conservative financial principles, firms facing heightened liquidity pressure or elevated risk typically conserve cash and curtail dividends to preserve internal buffers; from that vantage point, SOEs’ decisions to raise dividends during a crisis appear at odds with prudential practice [11]. External pressure to remit larger payouts for fiscal purposes can erode internal financial flexibility, redirecting funds that would otherwise support productive investment or strengthen capital toward distributions to the controlling shareholder, the state [20, 92]. In effect, a “dividends-for-the-state” motive may shift managerial priorities away from long-term objectives such as expansion and competitiveness toward meeting the government’s short-term revenue needs. Some SOEs may therefore distribute earnings needed for investment projects or solvency support, which could weaken growth and competitiveness over time. Conversely, the government as owner may weigh macroeconomic considerations, viewing higher dividend transfers as contributors to public finances that can be redeployed through expenditure [95]. The result is a clear trade-off between corporate financial logic and fiscal–political demands, with SOE dividend policy reflecting a negotiated balance rather than the purely firm-level optimization typical of private companies.

From a capital market perspective, our event study indicates that investors on the Indonesia Stock Exchange responded positively to SOE dividend announcements primarily during the crisis and post-crisis phases, whereas pre-crisis reactions were mixed or even negative. This temporal pattern suggests that domestic investors interpret dividend signals differently under heightened uncertainty and likely differently from investors in advanced markets [13, 32]. In more informationally efficient markets, several studies documented muted or negative responses to dividend news during the pandemic; for example, in India, dividend announcements had no significant effect despite producing abnormal returns before the crisis [96], and in GCC countries investors reacted weakly or negatively to dividend increases during the pandemic [97]. By contrast, in Indonesia, as in some other emerging markets, dividend signals amid crisis conditions tended to elicit stronger enthusiasm. Our results align with evidence that certain sectors in India experienced favorable market reactions to dividend announcements during COVID-19 [44] and with Indonesian studies that reported positive stock market responses to dividend actions for manufacturing firms, green investment firms, and property issuers [11, 13, 32]. Collectively, these findings point to a differentiated behavioral pattern among Indonesian investors when evaluating dividend signals under crisis conditions.

Therefore, our empirical evidence indicates that, within Indonesian SOEs during crisis periods, signaling mechanisms prevail over the cash-conservation impulse predicted by the pecking order, consistent with the view that macro uncertainty elevates the informational weight of dividends and encourages firms to continue paying as a credible signal of cash flow resilience. In episodes of turbulence, dividend declarations carry stronger information content and need not follow the conventional pattern of cuts; in some markets, firms even raised payouts during the crisis [8, 40]. Although crises heighten liquidity risk and uncertainty, SOEs were able to maintain or increase dividends, suggesting that management successfully balanced the fiscal demands of the controlling shareholder with internal financing needs [20, 92]. The role of government support and state ownership helps explain this latitude, since public ownership embeds fiscal and policy objectives that shape governance and payout preferences in SOEs [15, 98]. In short, even when pecking order incentives to retain cash are considered, the pressure to convey positive signals and to meet the expectations of the state shareholder often dominates, becoming the decisive force behind dividend choices during crisis episodes [13, 20]. This is consistent with an integrative theoretical frame in which signaling and pecking order interact under SOE institutional features, with the aims and backing of the state owner moderating the liquidity–information trade-off [15]. Our event-study results, showing positive market reactions to SOE dividend announcements during crises, likewise accord with evidence from emerging markets that investors value dividend signals when uncertainty is elevated [34, 44].

6- Conclusion

The evidence indicates that Indonesian SOEs increased dividend payouts during the crisis phase relative to the pre-crisis and post-crisis periods. Event-study results align: in 2020, abnormal returns and cumulative abnormal returns were positive on several days around the announcement date, and in 2022-2023 similar positives occurred at multiple points within the event window, whereas 2019 showed no consistent positive response and 2021 again weakened. Across models, sub-periods, and market metrics, SOE dividends were higher and were received more favorably during crisis episodes than before the crisis, with reactions strongest in the crisis and recovery phases. Collectively, the results offer scholarly and practical implications for dividend governance in SOEs. This adaptive pattern during the COVID-19 shock suggests that standard predictions of dividend cuts under heightened uncertainty are context-contingent because payout decisions depend on institutional features and country-specific policy regimes. Under crisis pressure and public mandates, the SOEs maintained or increased dividends, mirroring subsets of firms in other markets during the pandemic and underscoring heterogeneity and investors’ scope to read dividends as signals. By showing signaling to be more relevant than the pecking order and by integrating political-economy considerations, especially SOEs as development instruments and sources of fiscal contribution, the study advances dividend policy research in emerging markets. In practice, crisis-period SOE dividends represent multidimensional strategies that balance corporate health, government shareholder fiscal preferences, and capital-market confidence when macro shocks weigh on the domestic economy, as documented for Indonesia during the pandemic.

This study has several limitations. First, the scope is confined to Indonesian state-owned enterprises, encompassing both central and regional ownership, which constrains the generalisability of the findings to the wider population of listed firms, especially private and multinational companies. Second, crisis classification relies on a binary indicator and on GDP growth as a macroeconomic proxy, without incorporating additional signals such as stock exchange volatility, unemployment rates, or interest rates [9, 99, 100]. Third, the available sample comprises twenty-one firms observed over a ten-year period, which is relatively small; when a central–regional ownership dummy was added, the regression exhibited poorer model fit and destabilized the main parameter estimates. Moreover, the fixed event window in the event study may not fully capture cross-sectoral heterogeneity in market responses or firm-specific attributes such as leverage, capital intensity, or ownership structure. Future research should widen the sample to include non-SOE firms and adopt a multidimensional crisis framework. Further exploration of mediating and moderating factors, including governance quality, ownership configuration, and investment opportunities, could provide a more comprehensive account of the linkage between dividend policy and market reactions [12, 101]. Comparative work across ASEAN countries using mixed-economy settings is also promising for testing robustness under varying institutional and fiscal contexts [102]. In addition, subsequent studies could employ alternative crisis proxies such as stock exchange volatility, unemployment rates, or interest rates, extend the time-series span with a larger cross-sectional unit, and reintroduce the central versus regional ownership control once a more balanced number of firms in each category is available.

7- Declarations

7-1- Author Contributions

Conceptualization, G.M.T., P.G.H., and D.T.W.W.; methodology, G.M.T., P.G.H., D.T.W.W., and R.K.; software, G.M.T., P.G.H., R.K., M.A., and L.W.; validation, G.M.T., P.G.H., N.A., D.T.W.W., G.L., M.A., and L.W.; formal analysis, G.M.T., P.G.H., N.A., D.T.W.W., and G.L.; investigation, G.M.T., P.G.H., N.A., D.T.W.W., R.K., and M.A.; resources, G.M.T., P.G.H., N.A., D.T.W.W., G.L., and M.A.; data curation, G.M.T., P.G.H., R.K., and L.W.; writing—original draft preparation, G.M.T., P.G.H., N.A., D.T.W.W., R.K., G.L., M.A., and L.W.; writing—review and editing, G.M.T., P.G.H., N.A., D.T.W.W., R.K., G.L., M.A., and L.W.; visualization, G.M.T., P.G.H., G.L., and L.W.; supervision, G.M.T., P.G.H., and D.T.W.W.; project administration, P.G.H., N.A., R.K., G.L., M.A., and L.W.; funding acquisition, G.M.T., N.A., R.K., G.L., M.A., and L.W. All authors have read and agreed to the published version of the manuscript.

7-2- Data Availability Statement

The data presented in this study are available on request from the corresponding author.

7-3- Funding and Acknowledgements

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7-4- Institutional Review Board Statement

Not applicable.

7-5- Informed Consent Statement

Not applicable.

7-6- Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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