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Dividend Policy and the Trade-Off Between Real and Accrual-Based Earnings Management: Empirical Evidence from the KOSPI Market

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Abstract

In this study, we examine whether dividend policy is associated differently with accrual-based earnings management and real earnings management measured through abnormal operating cash flow. We analyze 8839 firm-year observations from 569 non-financial firms listed in the Korea Composite Stock Price Index (KOSPI) market from 1996 to 2024 using firm and year fixed-effects regressions with firm-clustered standard errors. We find no consistent association between dividend yield and accrual-based manipulation, but we find a negative association with abnormal operating-cash-flow manipulation. As dividend yield rises, the within-firm relation between the two measures becomes weaker. Payout burden relative to operating profit provides the primary evidence for this pattern, while the free-cash-flow and operating-cash-flow measures provide corroborating evidence. Cash holdings provide suggestive conditioning evidence, ownership concentration has no reliable moderating role, and the exploratory chaebol analysis is statistically inconclusive because only 267 affiliated firm-years limit power. Alternative real-activity measures do not reproduce the core result, so the evidence is concentrated in abnormal operating cash flow. These findings represent conditional within-firm associations, not managerial intent or a causal effect of dividend policy. These empirical patterns suggest that boards and regulators may consider dividends together with accrual and operating-cash-flow indicators, especially when payouts absorb a large share of internal resources.

Keywords: dividend policy; accrual-based earnings management; real earnings management; corporate governance; financial flexibility; KOSPI

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1. Introduction

How is dividend policy associated with corporate reporting quality, and does that association differ across channels of reporting discretion? This question matters because dividend policy is a core corporate-finance decision, not only a distribution choice or a reporting-quality correlate. In the classic agency view, dividend payments are linked to

lower free cash flow under managerial control, greater exposure to external capital-market monitoring, and higher reputational costs of opportunistic reporting (Easterbrook, 1984; Jensen, 1986; La Porta et al., 2000). Dividends also carry information about expected cash-flow capacity, financial strength, and managerial confidence (He et al., 2017; Hussain & Akbar, 2022; Miller & Modigliani, 1961; Tong & Miao, 2011).

This information role connects dividend policy to earnings management. Investors may read payouts as signals of firm quality, but evidence on whether dividends reliably predict future earnings remains mixed. Dividend-paying firms often exhibit higher reporting quality, yet that evidence is incomplete when it examines only one reporting channel (He et al., 2017; Hussain & Akbar, 2022; Tong & Miao, 2011). Dividend commitments may be associated with less free cash flow and greater scrutiny, while also coinciding with stronger incentives to support reported performance when earnings or operating conditions fall short.

Earnings management occurs when managers use accounting choices or operating decisions to influence reported earnings (Almutairi, 2021; Haga et al., 2022). Financial reports communicate firms' financial health, losses, operating risks, liquidity, and investor relations (Trinh et al., 2022). Major corporate failures show that unreliable reporting can impose costs on investors, creditors, employees, and capital markets. The cases of Enron, WorldCom, and Lehman Brothers illustrate how reporting failures were associated with investor losses, employment disruption, and wider market instability (Campa & Laguecir, 2025; Hickman et al., 2021). These cases support examining payout policy and reporting quality jointly because external stakeholders use both when assessing firm condition and managerial decisions.

Managers exercise reporting discretion through two broad channels. Accrual-based earnings management (AEM) works through accounting estimates and accrual judgments, including revenue recognition, provisions, depreciation assumptions, and working-capital accruals. It alters reported earnings without necessarily changing current operating activity. Real earnings management (REM) changes actual business decisions, including sales timing, discretionary spending, production levels, and operating cash flows (Cohen & Zarowin, 2010; Roychowdhury, 2006; Zang, 2012). Because real operating choices can resemble ordinary business decisions, auditors, investors, and analysts may find them harder to distinguish from normal activity.

Dividend commitments may be associated with lower earnings management because sustained payouts often accompany stable cash flows, less free cash flow under managerial control, and greater outside scrutiny (He et al., 2017; Jensen, 1986). This association need not be uniform across reporting channels. When firms maintain dividends as operating conditions weaken, the payout commitment may coincide with a different configuration of discretion across visible accrual choices and less visible real operating decisions. The association may also vary with governance because monitoring need not operate equally across both channels. We expect the cross-channel relation to be less pronounced among firms with greater financial flexibility because cash buffers provide more room to sustain dividends without unusual reporting or operating choices. Our design relies on within-firm variation over time, not an exogenous change in payout policy. We therefore interpret the expected pattern as conditional co-movement, not a causal effect.

This cross-channel view points to a gap in the dividend–earnings-management literature. Prior studies ask whether dividend policy is associated with accrual-based reporting quality, leaving open how accrual and real operating measures are jointly related when accrual manipulation becomes more costly or less attractive (He et al., 2017; Hussain & Akbar, 2022). We address this gap with three research questions. First, is dividend policy associated with the configuration of reporting discretion across accrual-based and real

operating channels? Second, does the within-firm relation between accrual-based manipulation and real operating choices vary with dividend yield? Third, do payout intensity, payout burden, governance, business-group affiliation, and cash-based financial flexibility condition that association?

The Korean capital market is a useful setting for these questions. Dividend policy operates in an information environment shaped by asymmetric information, agency costs, and managerial incentives, as well as signaling about future cash flows (Guttman et al., 2010; Jensen, 1986; Lambrecht & Myers, 2012; Renneboog & Szilagyi, 2020; Syed et al., 2018). The cross-channel association may vary with governance and group affiliation because monitoring and access to internal capital markets differ across firms. Firms listed in the Korea Composite Stock Price Index (KOSPI) market operate under concentrated ownership, prominent business-group affiliation, and meaningful variation in internal liquidity. These features allow us to examine whether the associations with dividend yield and internal-resource payout burden vary with monitoring, internal capital-market support, or cash-based financial flexibility. Ownership concentration captures variation in oversight, chaebol affiliation captures potential internal capital-market support, and cash holdings capture firms' financial flexibility when resources tighten (Khanna & Palepu, 2000; La Porta et al., 2000; Pinkowitz et al., 2006).

We examine these questions using 8839 firm-year observations from 569 non-financial KOSPI firms from 1996 to 2024. Our design combines firm and year fixed effects, firm-clustered standard errors, and phased controls for firm characteristics, governance, and liquidity. We measure accrual discretion with discretionary-accrual models, real activities manipulation with operating-cash-flow and other real-activity proxies, market-based dividend yield with DIV_YIELD, payout status with DIV_PAYER, relative payout intensity with high-yield status and the payout ratio, and internal-resource payout burden with three dividend-to-resource ratios. Our heterogeneity tests use ownership concentration, business-group affiliation, and cash holdings to capture monitoring, internal capital-market support, and financial flexibility.

Our results speak to each question directly. We find no consistent relation between dividend yield and standalone accrual-based manipulation across specifications, but we find a negative relation with abnormal operating-cash-flow manipulation. We also find that the within-firm relation between accrual-based earnings management and abnormal operating-cash-flow manipulation weakens as dividend yield rises. This shows a cross-channel association, not a managerial response. The operating-profit payout-burden measure provides the primary H3b evidence because it does not share an operating-cash-flow construction component with the REM outcome. Results based on free cash flow and operating cash flow are treated only as corroborating evidence because both measures contain operating cash flow. Cash holdings provide suggestive conditioning evidence, while ownership concentration has no reliable moderating role. The chaebol analysis is exploratory and statistically inconclusive because only 267 affiliated firm-years provide limited power. Our additional tests show that the core evidence is concentrated in the operating-cash-flow channel.

This paper makes three contributions to the corporate-payout and financial-reporting literature. First, we provide a specific correction to how the dividend–reporting-quality relation is understood. Prior research often examines whether dividends are associated with less accrual manipulation. In this work, we examine accrual-based and operating-cash-flow measures together. Our results show that dividend policy is not associated evenly with the two reporting channels. Low measured accrual manipulation may therefore coexist with unusual operating-cash-flow patterns. Second, we show that the relation between the two measures becomes weaker as dividend yield rises. The operating-profit payout-

burden test provides the primary H3b evidence because operating profit is not used to construct the abnormal operating-cash-flow manipulation measure. The free-cash-flow and operating-cash-flow tests are corroborating evidence subject to their shared operating-cash-flow component. Third, we describe the boundaries of our evidence. Our cross-channel result is concentrated in abnormal operating cash flow and does not extend consistently to other real-activity measures. Cash holdings provide suggestive conditioning evidence, ownership concentration has no reliable moderating role, and the exploratory chaebol analysis is statistically inconclusive because the affiliated subsample limits power. These findings show within-company associations, not managerial intent or a causal effect of dividends. The findings suggest that dividend payments or low accrual manipulation alone may not indicate uniformly higher reporting quality to investors, boards, auditors, and regulators.

We organize the rest of this paper as follows. Section 2 develops our hypotheses. Section 3 describes our data, variable construction, research design, and limits to causal inference. Section 4 presents our results and sensitivity tests. Section 5 discusses their implications. Section 6 concludes.

2. Literature Review and Hypothesis Development

This study builds on the information-content-of-dividends hypothesis. This view treats dividend payments as signals associated with firms' prospective earnings, earnings quality, and future cash-flow capacity (Deng et al., 2017; Ham et al., 2020; He et al., 2017; Nguyen & Bui, 2019; Skinner & Soltes, 2011; Tong & Miao, 2011; Trinh et al., 2022). Investor responses to dividend changes are commonly interpreted as conveying information about future earnings potential (Ham et al., 2020). Dividend increases are generally associated with favorable news, whereas decreases are associated with unfavorable news. Brav et al. (2005) likewise show that dividend distributions communicate information to investors. If dividends mainly transmit truthful information, dividend-paying firms should exhibit higher earnings quality and less earnings management.

Dividends do not reveal information automatically. Their information content may be less reliable when firms maintain payouts alongside reputational concerns, market expectations, financing-access considerations, or regulatory incentives (Deng et al., 2017; Guttman et al., 2010; Lambrecht & Myers, 2012; Syed et al., 2018). This issue is especially relevant in Korea, where listed firms operate in an information environment shaped by concentrated ownership, prominent business-group affiliation, and meaningful variation in internal liquidity (Khanna & Palepu, 2000; La Porta et al., 2000; Pinkowitz et al., 2006). These features allow us to examine when dividends retain their information role and when payout commitments coincide with incentives to distort firm behavior. In these settings, dividend commitments may be maintained even when earnings, operating cash flows, or internal liquidity fall short of the resources associated with the payout.

Differences between managers' and owners' interests are often associated with stronger earnings-management incentives (Alam et al., 2020; Jensen, 1986). Agency theory associates dividend payments with lower free cash flow under managerial control, greater exposure to capital-market monitoring, and less scope for private benefits (Easterbrook, 1984; Jensen, 1986; La Porta et al., 2000). Regulatory complexity, agency frictions, and information asymmetry can still limit external monitoring. Internal governance mechanisms, especially boards of directors and ownership structures, therefore remain important correlates of earnings-management incentives (Abdelsalam et al., 2016; Cornett et al., 2009; Mersni & Othman, 2016; Sáenz González & García-Meca, 2014). Information asymmetry and financing constraints are also associated with stronger incentives to present a misleading picture of financial condition (Hussain & Akbar, 2022; Khan et al., 2022). Dividend

policy may therefore be associated with monitoring intensity, payout conditions, and differences in the relative attractiveness of earnings-management channels. Accrual-based accounting choices and real operating decisions differ in visibility, detection risk, cash-flow consequences, and monitoring costs. Dividend policy should be evaluated as a financing commitment associated with the relative costs of reporting discretion across these channels (Cohen & Zarowin, 2010; Gao et al., 2017; Roychowdhury, 2006; Zang, 2012).

2.1. Dividend Policy and the Composition of Earnings Management

Earnings management is a central indicator of financial-reporting quality. Reported earnings contain non-discretionary components arising from the firm's business model and operating environment, as well as discretionary components generated by managerial reporting choices (Francis et al., 2004; Healy & Wahlen, 1999; Schipper, 1989). Lower earnings management is associated with more informative earnings, more accurate assessment of firm performance, and stronger reporting quality. Higher earnings management indicates greater use of discretion to pursue private benefits or influence outsiders' assessment of firm condition (Nguyen & Bui, 2019; Schipper, 1989). Earnings management is therefore a useful lens for examining whether dividend policy is associated with sustainable performance or with incentives to shape reported earnings.

The dividend literature provides strong support for the disciplinary prediction. Sustainable earnings growth and earnings stability are central considerations in payout decisions. Manipulated earnings are less likely to be sustainable because accrual distortions tend to reverse in future periods (Brav et al., 2005; Dechow et al., 1996). Dividend increases are associated with stronger reported information quality and lower future return volatility (Chen et al., 2007). Dividend-paying firms also tend to exhibit stronger earnings quality and better accruals quality than non-dividend-paying firms (Deng et al., 2017; Skinner & Soltes, 2011; Tong & Miao, 2011). Evidence from Indonesia, cross-country samples, Vietnam, and other settings shows a similar pattern. Dividend payments, persistence, and increases are associated with lower earnings manipulation, consistent with signaling and monitoring interpretations of dividends (He et al., 2017; Hussain & Akbar, 2022; Nguyen & Bui, 2019; Sirait & Veronica Siregar, 2014).

The opposing prediction also has support. Dividend thresholds and implicit payout commitments are associated with stronger earnings-management incentives when current performance falls short of the resources needed for distributions (Atieh & Hussain, 2012; Daniel et al., 2008). Payout policy may serve as a benchmark that managers seek to preserve, especially when a dividend cut could signal weak performance or disappoint investors. Liu and Espahbodi (2014) show that dividend-paying firms may engage more heavily in earnings smoothing. Evidence from Korea and other institutional settings also reports associations between dividend-related incentives and earnings management, with variation across ownership and governance conditions (Ben Salah & Jarboui, 2021; Haq et al., 2024; Sonu, 2025). The literature does not support treating dividends as an unconditional signal of reporting quality.

A key limitation of this evidence is its accrual-centered focus. Most dividend–earnings-management studies ask whether dividends are associated with more or less accrual-based manipulation. Managers can also use real operating decisions to influence reported performance. Real earnings management includes changing sales timing, cutting discretionary expenditures, overproducing, and altering operating cash flows. These choices affect operations and cash-flow realization, while accrual-based choices operate through accounting estimates (Cohen & Zarowin, 2010; Roychowdhury, 2006; Zang, 2012). Evidence from real estate investment trusts shows that firms facing binding dividend constraints use real actions such as reducing revenue, increasing expenses, or selling assets when cash flow

and external financing options are limited (Edelstein et al., 2008). Dividend policy may therefore be associated with both the use of discretion and the channel through which that discretion appears.

Under signaling and monitoring interpretations, dividend policy should be associated with lower earnings management across reporting channels. If payout conditions are also associated with differences in the relative costs of reporting choices, the relation may differ between accrual-based choices and real operating decisions. This distinction is especially relevant in Korea, where concentrated ownership, business-group affiliation, and internal liquidity are associated with variation in reporting choices. The first prediction is therefore a differential association across the two channels, not a uniform reduction in earnings management.

Hypothesis 1. *Dividend policy is associated differently with accrual-based earnings management and real operating-cash-flow manipulation.*

2.2. Dividend Yield and the Cross-Channel Relation Between AEM and REM

Dividend yield introduces a market-based dimension to the earnings-management question by indicating dividends relative to market value. The question is whether the relation between accrual-based and real operating measures varies across dividend-yield levels. Accrual-based earnings management alters the accounting component of earnings through estimates, provisions, and working-capital accruals. These choices are directly exposed to auditors, analysts, boards, and other monitors. Real earnings management affects the cash-flow component of earnings through operating decisions such as cutting research and development or advertising, accelerating sales, changing production, and reducing discretionary expenditures (Cohen & Zarowin, 2010; Roychowdhury, 2006; Zang, 2012). These decisions can resemble ordinary operating responses, and their lower visibility may coincide with greater relative reliance on real manipulation in settings with high capital-market pressure and more visible accrual discretion. Prior research shows greater reliance on REM in settings with tighter accounting standards, stronger enforcement, and higher relative costs of AEM, consistent with differences in the relative costs and timing of the two channels within the reporting year (Cohen et al., 2008; Cohen & Zarowin, 2010; Ewert & Wagenhofer, 2005; Zang, 2012).

Real activities manipulation is observed in settings where reported performance is associated with market access, valuation, or contractual standing. Firms use REM to meet earnings targets, around seasoned equity offerings and initial public offerings, and in response to credit-rating concerns (Alhadab et al., 2015; Brown et al., 2015; Cohen & Zarowin, 2010; Roychowdhury, 2006). Haga et al. (2018) show that publicly listed firms engage in more REM than privately held firms and use real activities as a larger share of their total earnings-management strategy. Capital-market pressure and ownership characteristics may be associated with greater relative reliance on operating decisions that can damage long-term value when short-term reporting objectives are important. Analyst scrutiny and other external monitoring are associated with tighter oversight of some forms of manipulation and with higher costs of missing important performance benchmarks (Graham et al., 2005; Haga et al., 2018; Yu, 2008).

Dividend commitments may function as a similar benchmark. Stable payouts are commonly interpreted as signals that earnings and cash-flow capacity can support the distribution. When cash flows tighten, dividend conditions may coincide with a higher relative cost of visible accrual manipulation. Real operating decisions can be embedded in pricing, production, expenditure, and working-capital choices. REM is not costless. It can sacrifice long-term value by reducing investment, weakening demand creation, or distorting operations (Graham et al., 2005; Haga et al., 2018). It can also impair earnings

information quality in ways that investors price. Kim and Sohn (2013) show that REM is associated with a higher cost of equity capital after controlling for AEM, consistent with an incremental risk premium. The relative costs of AEM and REM may therefore vary with payout conditions, especially when dividend cuts or weak reported performance carry market penalties.

This logic leads to a channel-specific prediction. Under a uniform-monitoring interpretation, accrual-based and real manipulation should move in the same direction. However, prior research shows that managers compare the timing, visibility, and economic costs of accounting choices and operating actions when selecting among reporting methods (Cohen et al., 2008; Cohen & Zarowin, 2010; Ewert & Wagenhofer, 2005; Zang, 2012). If payout conditions are associated with those relative costs, the observed relation between accrual discretion and cash-oriented operating choices may weaken as dividend yield rises.

There are economic reasons to expect this association to be most evident in operating decisions that affect near-term cash flows. Dividends require cash, and managers place considerable weight on maintaining established payout levels and avoiding dividend cuts (Brav et al., 2005; Daniel et al., 2008). Sales discounts, lenient credit terms, accelerated sales, collection policies, and working-capital management can alter current-period cash receipts and payments (Cohen & Zarowin, 2010; Roychowdhury, 2006). Production changes can commit resources to inventory, capacity use, storage, and later price concessions, while reductions in advertising, research, employee-related expenditure, and other discretionary spending can weaken future operating performance (Graham et al., 2005; Roychowdhury, 2006; Zang, 2012). These longer-lived costs may make production and discretionary-spending decisions less flexible within an annual payout cycle. Dividend conditions may therefore have a clearer association with cash-flow-sensitive operating choices than with production or discretionary expenditure. The prediction is consequently channel-specific and does not require the same pattern across every form of real operating activity.

Hypothesis 2. *Dividend yield is associated with a weaker within-firm relation between accrual-based earnings management and real operating-cash-flow manipulation.*

2.3. Payout Status, Payout Intensity, Payout Burden, and the Cross-Channel Pattern

Dividend yield, payout status, payout intensity, and internal-resource payout burden capture different dimensions of dividend policy. A modest commitment may coincide with ample liquidity, whereas a binding commitment is associated with less financial slack and greater dependence on current operating performance and cash-flow capacity (Brav et al., 2005; Denis, 2011). Under financing frictions, managers treat cash holdings and payout policy as linked components of financial flexibility. Cash supports liquidity, investment, and dividend continuation. Dividend payments draw down cash reserves (Denis, 2011; Houqe et al., 2023). Survey evidence shows that managers care strongly about maintaining smooth earnings and avoiding actions that disappoint capital-market expectations, even when doing so sacrifices long-term value (Brav et al., 2005; Graham et al., 2005). Dividend-threshold evidence also shows that managers manage earnings upward when expected dividend levels become difficult to support with current earnings (Daniel et al., 2008). A binding payout commitment should therefore be associated with stronger incentives to protect reported performance.

These payout conditions are relevant to the observed relation between accrual-based and real earnings management because the two channels carry different costs. Accrual choices can support reported earnings, but they are visible to auditors, analysts, creditors, and boards. They work through accounting estimates and working-capital accruals. Real operating decisions can be embedded in sales policy, discretionary spending, production, and working-capital management. These choices may therefore be harder to separate from

ordinary business responses (Cohen & Zarowin, 2010; Roychowdhury, 2006; Zang, 2012). When payout commitments are harder to sustain from internal resources, the observed reporting configuration may place less weight on visible accrual discretion and more weight on operating choices related to the cash-flow component of earnings.

Two distinct questions follow from this logic. The first concerns relative standing. Does a firm's payout look large next to the payouts of other firms? Dividend-payer status describes the extensive-margin commitment to distribute cash. High-yield status and the payout ratio measure relative payout intensity. The second concerns payout burden relative to internal resources. Does a firm's payout look large next to its own free cash flow, operating profit, or operating cash flow? A firm can rank high in the market distribution of payout policy while retaining ample internal resources. A modest dividend by market standards can also absorb most of a firm's own operating resources. These conditions need not move together.

Payout burden relative to internal resources has a clearer theoretical link to the cross-channel relation. Larger dividends relative to free cash flow, operating profit, or operating cash flow indicate less internal capacity remaining after the distribution. Under these conditions, payout burden may be associated with a narrower set of margins for preserving dividends without unusual reporting or operating choices (Denis, 2011; Houqe et al., 2023; Jensen, 1986). Listed firms facing capital-market pressure use more real earnings management and rely on it more heavily within their total earnings-management strategy (Haga et al., 2018). Prior evidence also shows greater reliance on real earnings management when accrual manipulation becomes more costly under stronger reporting enforcement, as well as the adjustment of real activities during the year before accrual choices are finalized near year-end (Cohen et al., 2008; Cohen & Zarowin, 2010; Zang, 2012).

Relative payout intensity provides a weaker theoretical case. A high dividend yield or payout ratio need not mean that a payout strains a specific firm's resources. It may only describe the firm's position in the market distribution of payout policy. That position can be compatible with ample internal flexibility. We therefore state separate predictions for relative payout intensity and payout burden relative to internal resources.

Hypothesis 3a. *The weakening of the within-firm relation between accrual-based earnings management and real operating-cash-flow manipulation predicted in Hypothesis 2 is stronger among dividend payers and firms with higher relative payout intensity, measured by high-yield status or the payout ratio.*

Hypothesis 3b. *The weakening of the within-firm relation between accrual-based earnings management and real operating-cash-flow manipulation predicted in Hypothesis 2 is stronger when dividends are large relative to a firm's own free cash flow, operating profit, or operating cash flow.*

2.4. Governance, Financial Flexibility, and Heterogeneous Reporting Choices

The cross-channel pattern predicted in Hypothesis 2 should not hold with equal strength across all firms. Governance and financing conditions may be associated with both earnings-management incentives and the channels through which discretion appears. Governance captures variation in the monitoring of accounting estimates and operating decisions. External monitoring by analysts, auditors, creditors, and the financial press is associated with detection risk and reputational costs (Haga et al., 2018; Yu, 2008). Internal governance operates through ownership concentration and managerial incentives. Closer alignment of ownership and control is associated with managers bearing more of the value loss from costly real operating distortions and may therefore coincide with less use of such choices for short-term reporting objectives (Di Meo et al., 2017; Jensen & Meckling, 1976).

Dispersed ownership and stronger agency conflicts may also coincide with greater weight on short-term reporting incentives.

Financial flexibility is a separate conditioning force. Under financing frictions, managers use cash holdings and payout policy jointly to preserve flexibility. Cash supports liquidity, investment, and dividend continuation. Dividend payments draw down cash reserves (Denis, 2011; Houqe et al., 2023). Firms with larger cash reserves have more capacity to sustain dividends without unusual reporting choices, whereas firms with weaker liquidity have fewer available adjustment margins. Dividend cuts may convey negative information, external financing may be costly, and visible accrual manipulation may attract monitoring. Real operating decisions may therefore appear more feasible under these conditions, although the observed measures cannot establish managerial choice or intent. Chaebol affiliation can also provide access to internal capital markets, but it does not necessarily indicate stronger monitoring or greater liquidity. Ownership concentration, chaebol affiliation, and cash holdings therefore capture distinct conditioning forces in the Korean setting (Hussain & Akbar, 2022; Khanna & Palepu, 2000; La Porta et al., 2000; Pinkowitz et al., 2006).

Governance and organizational form do not yield a single directional prediction. Stronger monitoring is often associated with lower accrual and real manipulation, while uneven monitoring across accounting estimates and ordinary-looking operating decisions may be associated with a different relation between the two measures. The detection, enforcement, timing, and operating costs attached to each channel differ (Ewert & Wagenhofer, 2005; Zang, 2012). Ownership concentration therefore motivates H4a. Chaebol affiliation is examined separately as an exploratory institutional extension because the affiliated subsample is small and may provide limited statistical power.

Cash-based financial flexibility provides a clearer prediction. Firms with larger cash buffers have more room to maintain dividends without unusual accounting estimates or operating choices. The weakening of the relation between accrual-based earnings management and real operating-cash-flow manipulation should therefore be less pronounced at higher levels of cash holdings.

Hypothesis 4a. *The weakening of the within-firm relation between accrual-based earnings management and real operating-cash-flow manipulation predicted in Hypothesis 2 varies with ownership concentration.*

Hypothesis 4b. *The weakening of the within-firm relation between accrual-based earnings management and real operating-cash-flow manipulation predicted in Hypothesis 2 is less pronounced when firms hold more cash.*

3. Research Design and Methods

In this section, we describe our data, variable construction, and fixed-effects design. We use within-firm variation, common year effects, and phased controls, so we interpret the dividend–reporting relation as a conditional association and not as causal evidence. Firm fixed effects absorb time-invariant heterogeneity, while year fixed effects absorb common conditions. They do not rule out an unobserved firm-year shock associated with dividend policy, accrual-based earnings management, and real earnings management. We discuss this limitation in Section 5. Our tests follow the theory in Section 2 and treat dividends as payout commitments associated with the relative cost of accrual-based and real reporting choices. Governance and financial flexibility may condition this association (He et al., 2017; Hussain & Akbar, 2022; Zang, 2012).

3.1. Data, Sample Construction, and Empirical Setting

The initial dataset contains 18,473 firm-year observations for firms listed in the Korea Composite Stock Price Index (KOSPI) market from 1996 to 2024. Financial statement and market variables come from KIS-Value (https://www.valuesearch.co.kr/) (accessed on 28 September 2025). The raw files are reorganized into a firm-year panel before we construct the accrual-based earnings management (AEM), real earnings management (REM), dividend-policy, governance, and liquidity variables. The long sample window contains material variation in payout policy, ownership structure, business-group affiliation, and internal liquidity. It also spans the 1997 Asian financial crisis, the 2008 global financial crisis, and the COVID-19 period. Year fixed effects absorb economy-wide conditions common to firms in each year. All continuous variables are winsorized at the 1st and 99th percentiles to reduce the influence of extreme observations without deleting valid firm-years.

Sample construction proceeds in three layers. First, we exclude financial and insurance firms, along with other firms whose reporting incentives are shaped by distinct regulatory capital regimes. The implemented screen also removes observations with missing or non-positive total assets, sales, or net income. Positive assets and sales are required for scaling and normal-activity estimation. The positive-income restriction is part of the original sample screen and means that the results do not extend directly to loss firm-years. After these filters, the industry-period distribution contains 11,223 firm-year observations. Table A1 shows the economic composition of this filtered KOSPI sample before regression-specific requirements are imposed. Raw materials, information technology, consumer goods, and healthcare account for most observations. The filtered sample is not limited to a single sector or crisis subperiod.

Second, the construction of AEM and REM proxies imposes stricter requirements. The accrual models require lagged assets, changes in revenues and receivables, property, plant, and equipment, depreciation, and industry-year cells with enough observations. The REM models require operating cash flows, production-cost components, discretionary expenditure items, lagged sales, and related scaling variables. These requirements reduce the usable earnings-management sample to 9591 firm-year observations. This first stage removes 1632 observations, or 14.54% of the 11,223-observation filtered sample. This measurement sample contains the core AEM and REM variables but does not require the full set of lagged controls used in the phased tests.

Third, the main common-sample regressions use 8839 firm-year observations from 569 non-financial firms. This sample requires non-missing values for dividend yield, the primary AEM and REM variables, lagged firm characteristics, ownership concentration, chaebol affiliation, cash holdings, and liquidity controls. This second stage removes 752 observations, or 7.84% of the 9591-observation measurement sample. Across both stages, 2384 observations are removed, equal to 21.24% of the 11,223-observation filtered sample. The common sample keeps coefficients comparable across the phased H1 regressions, the H2 tests, the H3a payout-intensity specifications, and the H4a–H4b heterogeneity analyses. The H3b payout-burden tests use measure-specific samples because the three internal-resource denominators have different data availability. The free-cash-flow and operating-cash-flow specifications use 7093 observations. The operating-profit specification uses 7421 observations. Table 1 reports descriptive statistics for the 8839-observation common sample. Table A1 reports the broader 11,223-observation filtered sample.

The Korean setting is useful for two reasons. First, ownership concentration remains pronounced. This creates meaningful variation in internal monitoring intensity. Second, Korean firms differ in organizational form, particularly between stand-alone and chaebol-affiliated firms. This allows the analysis to connect payout policy to internal capital markets and financial flexibility (Khanna & Palepu, 2000; La Porta et al., 2000; Pinkowitz

et al., 2006). These features make Korea a suitable setting for testing whether dividend yield, payout intensity, and internal-resource payout burden are associated with reporting-channel choices, not only with the level of a single earnings-management proxy.

Table 1. Descriptive Statistics.

Panel A: Earnings-management and payout variables						
Variable	N	Mean	SD	P25	Median	P75
AEM_MJONES	8839	0.0503	0.0509	0.0158	0.0348	0.0658
AEM_JONES	8839	0.0503	0.0509	0.0158	0.0348	0.0658
AEM_KASZNIK	8839	0.0420	0.0433	0.0133	0.0290	0.0548
AEM_KOTHARI	8839	0.0496	0.0502	0.0155	0.0343	0.0657
REM_CFO	8839	−0.0004	0.0605	−0.0331	−0.0019	0.0291
REM_PROD	8839	0.0002	0.4797	−0.3030	−0.0708	0.1979
REM_SGA	8839	0.0016	0.1405	−0.0242	0.0483	0.0863
REM_INDEX	8839	0.0018	0.5224	−0.2866	−0.0298	0.2249
DIV_YIELD	8839	0.0156	0.0173	0.0000	0.0113	0.0238
DIV_PAYOUT	6699	0.2685	0.4363	0.0553	0.1582	0.3060
DIV_PAYER	8839	0.7054	0.4559	0.0000	1.0000	1.0000
HIGH_YIELD	4130	0.4976	0.5001	0.0000	0.0000	1.0000
Panel B: Lagged control variables						
Variable	N	Mean	SD	P25	Median	P75
L1_SIZE	8839	27.3054	1.5855	26.1699	27.0137	28.1930
L1_ROA	8839	0.0195	0.0702	0.0011	0.0254	0.0544
L1_MTB	8839	1.1285	1.1308	0.4652	0.7614	1.3150
L1_LEV	8839	0.5034	0.2045	0.3486	0.5145	0.6474
L1_FCF	8839	0.0496	0.0705	0.0103	0.0490	0.0893
L1_TANGIBILITY	8839	0.3565	0.1761	0.2300	0.3569	0.4762
L1_OWNC	8839	1.0057	1.7699	0.0000	0.0000	1.2900
L1_CHAEBOL_KFTC	8839	0.0302	0.1712	0.0000	0.0000	0.0000
L1_RCASH	8839	0.0727	0.0611	0.0283	0.0561	0.0982
L1_CURRENT_RATIO	8839	1.7613	1.5624	0.9415	1.3022	1.9018
Panel C: Indicator-variable distributions						
Variable and category		Frequency	Percent		Within-variable cumulative	
DIV_PAYER = 0		2604	29.46		29.46	
DIV_PAYER = 1		6235	70.54		100.00	
HIGH_YIELD = 0		2075	23.48		23.48	
HIGH_YIELD = 1		2055	23.25		46.72	
Unclassified yield		4709	53.28		100.00	
CHAEBOL_KFTC = 0		8572	96.98		96.98	
CHAEBOL_KFTC = 1		267	3.02		100.00	

Notes: This table reports descriptive statistics for the common regression sample of 8839 firm-year observations from 569 firms used in H1, H2, H3a, H4a, and H4b. Panel A reports the earnings-management and payout variables used in the main and robustness tests. Panel B reports the lagged controls used in the fixed-effects regressions. Panel C reports separate within-variable distributions for the indicator variables used in the payout and heterogeneity tests; percentages and cumulative percentages reset within each indicator block. DIV_PAYOUT is observed for dividend-paying firm-years with nonmissing payout ratios; HIGH_YIELD is defined only for bottom- and top-tercile positive-yield observations; middle-tercile positive-yield observations and non-payers are not used in high-versus-low-yield specifications and are therefore reported as not classified, not as a separate high-yield category. AEM_MJONES and AEM_JONES are estimated as independent cross-sectional regressions (Equations (2) and (3)); their close descriptive alignment coincides with a correlation of $\rho = 0.978$ and does not indicate a shared construction (see Section 3.2.1). The P25 value of 0.0000 for DIV_YIELD corresponds to the non-payer subgroup (29.46% of the sample, Panel C), not a low-yield payer group. Definitions of acronyms and variable abbreviations appear in Appendix A Table A3.

3.2. Variable Construction

3.2.1. Accrual-Based Earnings Management

Accrual-based earnings management (AEM) is measured with four widely adopted models. These are the Jones model (Jones, 1991), the Modified Jones model (Dechow et al., 1995), the performance-adjusted Kothari model (Kothari et al., 2005), and the Kasznik model (Kasznik, 1999). We first calculate total accruals ($TAC_{i,t}$) using the balance-sheet method.

$$TAC_{i,t} = (\Delta CA_{i,t} - \Delta Cash_{i,t}) - (\Delta CL_{i,t} - \Delta DCL_{i,t}) - DEP_{i,t} \quad (1)$$

Equation (1) constructs total accruals from changes in non-cash working capital and depreciation. Here, $\Delta CA_{i,t}$ is the change in current assets, $\Delta Cash_{i,t}$ is the change in cash and cash equivalents, $\Delta CL_{i,t}$ is the change in current liabilities, $\Delta DCL_{i,t}$ is the change in short-term debt, and $DEP_{i,t}$ is depreciation expense. Our accrual models also use $\Delta REV_{i,t}$ (change in revenues), $\Delta REC_{i,t}$ (change in net receivables), $PPE_{i,t}$ (gross property, plant, and equipment), $\Delta CFO_{i,t}$ (change in operating cash flows), $A_{i,t-1}$ (lagged total assets), and $ROA_{i,t-1}$ (lagged return on assets). We estimate Models (2) through (5) as separate cross-sectional regressions by industry-year group, with a minimum of ten firms per group. We use the absolute residual from each model, $|\epsilon_{i,t}|$, to measure the magnitude of accrual-based earnings management.[1]

The Jones model uses revenue changes and asset intensity to estimate normal accruals (Jones, 1991).

$$\frac{TAC_{i,t}}{A_{i,t-1}} = \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{\Delta REV_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \epsilon_{i,t} \quad (2)$$

The Modified Jones model adjusts revenue changes for changes in receivables to account for discretion exercised through credit sales (Dechow et al., 1995).

$$\frac{TAC_{i,t}}{A_{i,t-1}} = \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \epsilon_{i,t} \quad (3)$$

The performance-adjusted Kothari model adds lagged return on assets to control for operating performance (Kothari et al., 2005). This reduces the risk that performance-related accruals are classified as managerial discretion.

$$\frac{TAC_{i,t}}{A_{i,t-1}} = \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \alpha_4 ROA_{i,t-1} + \epsilon_{i,t} \quad (4)$$

The Kasznik model adds changes in operating cash flow to account for the relation between accruals and cash-flow performance (Kasznik, 1999).

$$\frac{TAC_{i,t}}{A_{i,t-1}} = \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{\Delta REV_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \alpha_4\left(\frac{\Delta CFO_{i,t}}{A_{i,t-1}}\right) + \epsilon_{i,t} \quad (5)$$

The Modified Jones measure, AEM_MJONES, is the primary accrual-based earnings-management proxy because it adjusts revenue changes for receivables. The Jones, Kothari, and Kasznik measures are used in alternative specifications. Estimating the four proxies separately shows whether the results depend on a single normal-accrual specification. It does not remove measurement error from any individual proxy.

3.2.2. Real Earnings Management

We follow the Korean-market implementation of Tulcanaza-Prieto and Lee (2022) and the underlying framework of Roychowdhury (2006). We capture potential distortion in

operating decisions through three channels that show how managers can support current-period performance. The first concerns sales-related actions, such as price discounts or lenient credit terms, that alter operating cash flow. The second concerns reductions in discretionary spending that can increase current-period margins. The third concerns excess production, which spreads fixed overhead over more units and lowers reported unit costs. We estimate each channel separately through industry-year regressions and then combine the sign-adjusted abnormal components into an aggregate measure.

Channel 1: Abnormal Cash Flow from Operations (ABN_CFO). We begin with the sales-related channel. To capture abnormal cash-flow patterns consistent with sales manipulation, such as excessive price discounts or lenient credit terms, we estimate the normal level of operating cash flow.

$$\frac{CFO_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{S_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{\Delta S_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t} \quad (6)$$

Here, $CFO_{i,t}$ is cash flow from operations, $S_{i,t}$ is total sales, and $\Delta S_{i,t}$ is the change in sales. The residual $(\varepsilon_{i,t})$ is the raw ABN_CFO measure. This residual is derived directly from operating cash flow. We note this construction detail because it becomes relevant in Section 3.2.3, where two payout-burden measures also draw on operating cash flow.

Channel 2: Abnormal SG&A Expenses ($ABN\_SG\&A$). We next consider discretionary spending. Managers may reduce selling, general, and administrative expenses to increase current-period margins.

$$\frac{SG\&A_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_4\left(\frac{S_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t} \quad (7)$$

Here, $SG\&A_{i,t}$ denotes selling, general, and administrative expenses used to proxy discretionary spending. The residual $(\varepsilon_{i,t})$ is the raw $ABN\_SG\&A$ measure.

Channel 3: Abnormal Production Costs (ABN_PROD). The final channel concerns production decisions. Overproduction allows firms to spread fixed overhead costs over a larger number of units, lowering the cost of goods sold ($COGS$).

$$\frac{PROD_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{S_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{\Delta S_{i,t}}{A_{i,t-1}}\right) + \alpha_5\left(\frac{\Delta S_{i,t-1}}{A_{i,t-1}}\right) + \varepsilon_{i,t} \quad (8)$$

Here, $PROD_{i,t}$ is the sum of $COGS$ and the change in inventory $(\Delta INV_{i,t})$. The residual $(\varepsilon_{i,t})$ is ABN_PROD.

The three residuals capture different operating margins. We align their signs before combining them so that each component has the same economic direction.

Aggregate Real Earnings Management Index (ABN_REM). We bring the three channels together in the following index.

$$ABN\_REM_{i,t} = (-1 \times ABN\_CFO_{i,t}) + (-1 \times ABN\_SG\&A_{i,t}) + ABN\_PROD_{i,t} \quad (9)$$

Following the sign-adjustment convention of Tulcanaza-Prieto and Lee (2022), we multiply ABN_CFO and $ABN\_SG\&A$ by -1. The multiplication reverses their original signs because unusually low operating cash flow and SG&A spending are the patterns associated with greater manipulation, allowing larger values to indicate more real earnings management across all components. Accordingly, $REM\_CFO = -ABN\_CFO$, $REM\_SGA = -ABN\_SG\&A$, $REM\_PROD = ABN\_PROD$, and $REM\_INDEX = REM\_CFO + REM\_SGA + REM\_PROD$. Higher values of these sign-adjusted measures indicate greater estimated real operating distortion. REM_CFO is the primary real earnings-management outcome. REM_SGA, REM_PROD, and REM_INDEX provide sensitivity

evidence. These residual-based measures can also capture unusual operating conditions and therefore remain proxies for real earnings management, not direct evidence of managerial intent.

For consistency with Table 1, the absolute residuals from Equations (2)–(5) are labeled AEM_JONES, AEM_MJONES, AEM_KOTHARI, and AEM_KASZNIK, respectively. The sign-adjusted measures from Equations (6)–(9) are labeled REM_CFO, REM_SGA, REM_PROD, and REM_INDEX. These labels are used throughout the descriptive statistics, regression tables, and empirical discussion.

3.2.3. Dividend Yield, Payout Status, Payout Intensity, and Payout Burden

Dividend yield (DIV_YIELD) is the baseline market-based dividend-yield measure and equals cash dividends divided by market value. The dividend-payer indicator (DIV_PAYER) equals one for firm-years with positive cash dividends and zero otherwise. It describes the extensive-margin commitment to distribute cash and defines the payer-only H3a diagnostic sample. The dividend-payout ratio (DIV_PAYOUT) equals cash dividends divided by net income and is observed for dividend-paying firm-years with available payout ratios. The high-yield indicator (HIGH_YIELD) equals one for top-tercile positive-yield observations and zero for bottom-tercile positive-yield observations. Middle-tercile positive-yield observations and non-payers are excluded from the high-versus-low-yield tests. HIGH_YIELD and DIV_PAYOUT are the relative payout-intensity moderators for H3a.

H3a and H3b distinguish payout status and relative payout intensity from internal-resource payout burden. DIV_YIELD is the market-based dividend-yield measure. For H3a, DIV_PAYER measures payout status, while DIV_PAYOUT and HIGH_YIELD measure relative payout intensity. These variables do not directly measure the resources available to support the distribution. H3b examines payout burden relative to the firm's own internal resources. Total common and preferred dividends (DIVT) are scaled by free cash flow, operating profit, or operating cash flow. Higher values indicate that dividends are larger relative to the selected internal-resource denominator.

Two payout-burden measures share an operating-cash-flow construction component with REM_CFO. Free cash flow is operating cash flow minus capital expenditures, while the operating-cash-flow denominator uses that cash-flow figure directly. Both therefore share an underlying component with the operating cash flow used to estimate ABN_CFO in Section 3.2.2. Operating profit does not contain operating cash flow by construction. The DIVT-to-operating-profit specification is therefore the primary H3b test. The DIVT-to-free-cash-flow and DIVT-to-operating-cash-flow specifications are retained only as corroborating tests. Table 2 summarizes the denominator construction, overlap with REM_CFO, and evidentiary role of each H3b payout-burden measure.

This mapping makes the construction overlap explicit and guides the interpretation of the H3b results in Section 4.

H4a uses lagged ownership concentration to capture governance. Lagged KFTC-based chaebol affiliation is retained as an exploratory institutional extension, not as a formal component of H4a. CHAEBOL_KFTC is a time-varying firm-year indicator based on the KFTC's annually updated designation of large business groups and enters the regressions with a one-period lag. Table A2 reports groups matched during at least one sample year. The table does not imply that every listed firm remains affiliated in every year because firm-year affiliation may change across the panel. H4b uses lagged cash holdings to measure cash-based financial flexibility. The current ratio remains a liquidity control and is not an H4b moderator. These variables capture monitoring structure, potential internal capital-

market access, and the cash capacity available to sustain dividend commitments (Hussain & Akbar, 2022; Njoku & Lee, 2024; Pinkowitz et al., 2006).

Table 2. Accounting-component mapping for the H3b payout-burden measures.

H3b Measure	Denominator Construction	Overlap with REM_CFO	Evidentiary Role
DIVT/OPROF	Operating profit	No shared operating-cash-flow component	Primary H3b evidence
DIVT/FCF	Operating cash flow minus capital expenditures	Shares the operating-cash-flow component indirectly	Corroborating evidence
DIVT/OCF	Operating cash flow	Directly incorporates operating cash flow	Corroborating evidence

Notes: REM_CFO denotes real earnings management through operating cash flow. DIVT/OPROF is treated as the primary measure for testing H3b because its denominator, operating profit, does not share an operating-cash-flow component with REM_CFO. DIVT/FCF and DIVT/OCF are retained as corroborating measures because their denominators incorporate operating cash flow and therefore may exhibit mechanical or construction-related overlap with REM_CFO. The classification is intended to distinguish the evidentiary strength of the H3b measures without implying that the corroborating measures are invalid.

3.2.4. Control Variables

Table 1 reports the following controls. SIZE is the natural log of total assets. ROA is net income scaled by assets. MTB is market value scaled by book value. LEV is the total liabilities scaled by total assets. FCF is the operating cash flow minus capital expenditures, scaled by assets. TANGIBILITY is property, plant, and equipment scaled by assets. OWNC is ownership concentration. CHAEBOL_KFTC is the time-varying indicator for KFTC-based business-group affiliation defined in Section 3.2.3. RCASH is the cash and cash equivalents scaled by assets. CURRENT_RATIO is the current assets divided by current liabilities. All controls enter the regressions with a one-period lag. Table 1 denotes these lagged variables with the L1_ prefix. Lagging reduces simultaneity between current reporting choices and contemporaneous firm characteristics.

FCF requires additional clarification because operating cash flow also enters the REM_CFO construction and two H3b denominators. As a control, however, L1_FCF is based on the prior year's operating cash flow and enters as a lagged firm characteristic. It therefore does not create the same contemporaneous construction overlap as the DIVT-to-FCF and DIVT-to-OCF measures with current REM_CFO. The principal construction concern remains with the current-period payout-burden measures discussed in Section 3.2.3.

3.3. Empirical Strategy

We use licensed Stata/SE 19 under a perpetual single-user license to test H1, H2, H3a–H3b, and H4a–H4b. Our firm fixed-effects regressions include year fixed effects and firm-clustered standard errors. For H1, we estimate the association between dividend yield and our two main reporting-channel outcomes, AEM_MJONES and REM_CFO. Our baseline specification is:

$$EM^{k}_{i,t} = \alpha + \beta_1 DIV\_YIELD_{i,t} + \Gamma' X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t}, \quad (10)$$

where $EM^{k}_{i,t}$ denotes either AEM_MJONES or REM_CFO, $X_{i,t-1}$ is the lagged control vector, μ_i are firm fixed effects, and λ_t are year fixed effects. Table Size enters first. Profitability, market-to-book, and leverage enter next. Free cash flow is then added, followed by tangi-

bility, ownership concentration, and Korea Fair Trade Commission (KFTC)-based chaebol affiliation. Cash holdings and the current ratio enter in the final specification. The KFTC classification is used because the Commission is the Korean competition-policy authority responsible for monitoring large business groups, checking excessive concentration of economic power, and encouraging improvements in corporate ownership and governance transparency (Njoku & Lee, 2024). This design shows whether the dividend-yield relation differs across accrual and real reporting channels and whether that difference remains after the main economic control blocks are added.

H2 tests the association described in Hypothesis 2 by interacting dividend yield with accrual-based earnings management in regressions explaining abnormal operating-cash-flow manipulation. REM_CFO is the central real-activity outcome because payout sustainability is closely linked to cash generation and operating liquidity. The main specification is:

$$\begin{aligned} REM\_CFO_{i,t} = \alpha + \delta_1 DIV\_YIELD_{i,t} + \delta_2 AEM\_MJONES_{i,t} \\ + \delta_3 (DIV\_YIELD_{i,t} \times AEM\_MJONES_{i,t}) + \Gamma' X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t}. \end{aligned} \tag{11}$$

The coefficient of interest is δ_3. The marginal AEM–REM_CFO slope is

$$\frac{\partial REM\_CFO_{i,t}}{\partial AEM\_MJONES_{i,t}} = \delta_2 + \delta_3 DIV\_YIELD_{i,t}, \qquad \delta_3 = \frac{\partial (\partial REM\_CFO_{i,t} / \partial AEM\_MJONES_{i,t})}{\partial DIV\_YIELD_{i,t}}.$$

A negative δ_3 indicates that the conditional AEM–REM_CFO relation is weaker at higher dividend yield. This coefficient shows cross-channel slope heterogeneity but cannot establish that dividend yield causes managers to change reporting channels. We estimate this equation using the same phased-control sequence as H1 and report marginal effects of AEM_MJONES at the 25th percentile, median, and 75th percentile of dividend yield. These estimates translate the interaction into our main quantitative test of the cross-channel pattern.

H3a and H3b test whether the weakening shown in H2 becomes more pronounced across payout status, relative payout intensity, or internal-resource payout burden. H3a examines payout status and relative payout intensity. We first re-estimate the H2 specification in payout-relevant subsamples, including dividend payers and high-dividend-yield firms. We then estimate formal moderation specifications of the form:

$$\begin{aligned} REM\_CFO_{i,t} = \alpha + \theta_1 DIV\_YIELD_{i,t} + \theta_2 AEM\_MJONES_{i,t} + \theta_3 INTENSE_{i,t} \\ + \theta_4 (DIV\_YIELD_{i,t} \times AEM\_MJONES_{i,t}) + \theta_5 (DIV\_YIELD_{i,t} \times INTENSE_{i,t}) \\ + \theta_6 (AEM\_MJONES_{i,t} \times INTENSE_{i,t}) + \theta_7 (DIV\_YIELD_{i,t} \times AEM\_MJONES_{i,t} \times INTENSE_{i,t}) \\ + \Gamma' X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t}, \end{aligned} \tag{12}$$

where $INTENSE_{i,t}$ is either a high-dividend-yield indicator or the dividend-payout ratio. The focal coefficient is θ_7. It indicates whether the H2 weakening becomes more pronounced as relative payout intensity rises.

H3b examines whether the weakening becomes more pronounced when dividends are large relative to the firm's own internal resources. These tests replace dividend yield with total dividends scaled by free cash flow, operating profit, or operating cash flow. Each specification estimates REM_CFO on the payout-burden measure, AEM_MJONES, their interaction, the full control vector, firm fixed effects, and year fixed effects. A negative interaction indicates that the AEM–REM_CFO relation weakens as dividends become larger relative to the selected internal-resource denominator. As shown in the accounting-component map in Section 3.2.3, the operating-profit-scaled measure is the primary H3b test because it does not share an operating-cash-flow construction component with REM_CFO. The

free-cash-flow- and operating-cash-flow-scaled measures provide corroborating evidence only because both share an operating-cash-flow component with the outcome.

H4a tests whether ownership concentration conditions the H2 relation. KFTC-based chaebol affiliation is examined with the same specification as an exploratory extension. H4b tests the directional prediction that higher cash holdings make the dividend-yield-associated weakening less pronounced. These analyses use the following heterogeneity specification:

$$\begin{aligned} REM\_CFO_{i,t} = {} & \alpha + \phi_1 DIV\_YIELD_{i,t} + \phi_2 AEM\_MJONES_{i,t} + \phi_3 MOD_{i,t-1} \\ & + \phi_4 (DIV\_YIELD_{i,t} \times AEM\_MJONES_{i,t}) + \phi_5 (DIV\_YIELD_{i,t} \times MOD_{i,t-1}) \\ & + \phi_6 (AEM\_MJONES_{i,t} \times MOD_{i,t-1}) + \phi_7 (DIV\_YIELD_{i,t} \times AEM\_MJONES_{i,t} \times MOD_{i,t-1}) \\ & + \Gamma' X_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t}, \end{aligned} \tag{13}$$

where $MOD_{i,t-1}$ is ownership concentration, KFTC-based chaebol affiliation, or cash holdings. We estimate the above equation using the three moderator specifications and report later in Column (1) tests H4a, Column (2), the exploratory chaebol analysis, and Column (3) tests H4b. The focal coefficient is ϕ_7. For H4a, it indicates whether the H2 relation varies with ownership concentration; in the exploratory column, it measures variation by chaebol affiliation without supporting a directional prediction. For H4b, a positive ϕ_7 indicates that greater cash holdings make the negative dividend-yield interaction with AEM_MJONES less pronounced. The common controls are lagged size, ROA, market-to-book, leverage, free cash flow, tangibility, ownership concentration, KFTC-based chaebol affiliation, cash holdings, and current ratio. The relevant moderator is omitted from the control block when it enters as the focal heterogeneity variable. Additional tests replace the real-activity outcome, the accrual-management proxy, and the payout definition to assess whether the channel-allocation evidence depends on a single measurement choice.

Limits to Causal Inference and Alternative Explanations

Firm fixed effects absorb time-invariant firm heterogeneity. Year fixed effects absorb macroeconomic conditions common to all firms. These effects do not rule out an unobserved firm-year shock that is jointly associated with dividend policy, accrual-based earnings management, and real earnings management. Our estimates therefore show conditional within-firm associations, not causal effects.

Selection provides one alternative explanation. Firms with stronger underlying cash generation may pay larger dividends and show less abnormal operating-cash-flow manipulation without any change in reporting behavior. Dividend yield can also rise when market value falls, so valuation or distress shocks may be associated with both the payout measure and reporting choices. This account fits the negative main relation between dividend yield and REM_CFO. It does not, by itself, explain why the AEM–REM_CFO slope varies with dividend yield. Even so, omitted shocks may be associated with slope heterogeneity as well as main-effect differences. The interaction is therefore harder to reconcile with a simple selection account, but it does not resolve the causal-inference concern.

The phased specifications estimate the same pre-specified H2 interaction under progressively richer controls. We treat them as sensitivity tests of one focal association, not as separate discoveries. Related interaction tests appear in later tables, which increases the risk of overinterpreting isolated significant estimates. Section 4 therefore reports exact p-values and places greater weight on results that remain stable across theoretically aligned specifications, measures, and samples.

4. Results

In this section, we report our findings using the common regression sample. We winsorize continuous variables at the 1st and 99th percentiles. Our descriptive and correlation tables establish the sample, scale, missingness, and bivariate dependence underlying the regression tests; we treat them as diagnostic, not causal, evidence.

4.1. Descriptive Statistics

Table 1 reports descriptive statistics for 8839 firm-year observations from 569 firms. The discretionary-accrual measures cluster closely together, with mean values indicating that the typical firm-year carries a modest but non-trivial level of accrual-based discretion. The real earnings-management measures center near zero by construction, a result of their residual form, not an absence of real activity manipulation at the firm level. Their scales differ widely, with REM_PROD's standard deviation roughly eight times that of REM_CFO. Dividend yield is right-skewed, with the mean above the median. Most firm-years carry modest or zero yields, while a smaller group of high-yield payers pulls the average upward. Return on assets averages 1.95%, below its median of 2.54%, indicating a group of weaker-performing firm-years that pull the mean down. The median firm generates positive free cash flow and finances 51.45% of its assets with liabilities. Average firm size (27.31) corresponds to roughly 725 billion KRW in total assets, consistent with a sample weighted toward large, established firms and away from small, newly listed ones. The mean market-to-book ratio of 1.13 indicates that the average firm trades close to its book value. Cash holdings and current ratio also show wide variation across the sample. Chaebol-affiliated observations account for 267 firm-years, or 3.02% of the sample.

4.2. Correlation Matrix

Table 3 reports Pearson correlations for the core constructs and controls.

Table 3. Core correlation matrix with main controls.

Panel A: Core variables and size, performance, growth, leverage, and cash-flow controls								
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) AEM_MJONES	1.0000							
(2) REM_CFO	0.2032 ***	1.0000						
(3) DIV_YIELD	−0.0913 ***	−0.2700 ***	1.0000					
(4) L1_SIZE	−0.0981 ***	−0.1281 ***	0.0447 ***	1.0000				
(5) L1_ROA	−0.1770 ***	−0.5348 ***	0.2527 ***	0.1615 ***	1.0000			
(6) L1_MTB	0.1433 ***	−0.0624 ***	−0.2291 ***	−0.0298 ***	−0.0124	1.0000		
(7) L1_LEV	0.1296 ***	0.2644 ***	−0.1390 ***	0.2037 ***	−0.3600 ***	0.0459 ***	1.0000	
(8) L1_FCF	−0.0820 ***	−0.4867 ***	0.1878 ***	0.1662 ***	0.4776 ***	0.0734 ***	−0.1830 ***	1.0000
Panel B: Core variables and governance, group−affiliation, and liquidity controls								
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) AEM_MJONES	1.0000							
(2) REM_CFO	0.2032 ***	1.0000						
(3) DIV_YIELD	−0.0913 ***	−0.2700 ***	1.0000					
(4) L1_TANGIBILITY	−0.1361 ***	−0.0086	−0.0036	1.0000				
(5) L1_OWNC	−0.1040 ***	−0.0418 ***	−0.0041	−0.0401 ***	1.0000			
(6) L1_CHAEBOL_KFTC	−0.0451 ***	−0.0060	0.0032	−0.0045	0.1739 ***	1.0000		
(7) L1_RCASH	0.0651 ***	−0.0912 ***	−0.0033	−0.3629 ***	0.0052	−0.0080	1.0000	
(8) L1_CURRENT_RATIO	−0.0518 ***	−0.1414 ***	0.0838 ***	−0.3238 ***	0.1059 ***	−0.0138	0.3188 ***	1.0000

Notes: This table reports Pearson correlation coefficients for the H4 common sample. *** denotes statistical significance at the 1% level, respectively. Stata reports *p*-values rounded to four decimals.

AEM_MJONES and REM_CFO are positively correlated in the raw data. DIV_YIELD is negatively correlated with both proxies, positively correlated with profitability and cash-

flow slack, and negatively correlated with leverage. Panel B shows no multicollinearity concern. AEM_MJONES and AEM_JONES correlate at $\rho = 0.978$ (untabulated).

4.3. Baseline Results for H1

Table 4 reports our baseline tests for H1 using the common regression sample of 8839 firm-year observations from 569 firms. In these specifications, we estimate firm fixed-effects models with year fixed effects and standard errors clustered by firm. We introduce controls sequentially in lagged form to show whether the dividend-yield coefficients are sensitive to firm size, profitability, growth opportunities, leverage, free cash flow, governance, business-group affiliation, and liquidity. Our baseline specifications do not include the H2 interaction between dividend yield and AEM_MJONES.

Panel A shows that dividend yield is not significantly associated with AEM_MJONES in any baseline specification. The coefficient moves from −0.0470 ($t = -1.00$) with only lagged size included, to 0.0172 ($t = 0.37$) after adding lagged ROA, market-to-book, and leverage, and to 0.0096 ($t = 0.21$) in the fully controlled specification. The estimate remains statistically indistinguishable from zero throughout. This is an imprecisely estimated association, not evidence that the competing theoretical forces discussed in Section 2.1 necessarily cancel one another. It is also consistent with limited within-firm variation in accrual discretion associated with dividend yield in this channel.

Table 4. Phased-control baseline evidence for H1: dividend yield and reporting channels.

	(1) Size	(2) Performance/Risk	(3) Cash-Flow Slack	(4) Governance/Institutional	(5) Liquidity
Panel A. Dependent variable: AEM_MJONES					
DIV_YIELD	−0.0470	0.0172	0.0168	0.0096	0.0096
	(−1.00)	(0.37)	(0.36)	(0.21)	(0.21)
L1_SIZE	−0.0081 ***	−0.0087 ***	−0.0087 ***	−0.0085 ***	−0.0084 ***
	(−3.59)	(−3.87)	(−3.85)	(−3.75)	(−3.73)
L1_ROA	–	−0.0430 ***	−0.0436 ***	−0.0468 ***	−0.0472 ***
	–	(−2.76)	(−2.61)	(−2.78)	(−2.81)
L1_MTB	–	0.0017	0.0017	0.0016	0.0015
	–	(1.60)	(1.58)	(1.44)	(1.41)
L1_LEV	–	0.0232 ***	0.0232 ***	0.0251 ***	0.0241 ***
	–	(3.19)	(3.19)	(3.47)	(3.04)
L1_FCF	–	–	0.0018	0.0047	0.0026
	–	–	(0.14)	(0.37)	(0.20)
L1_TANGIBILITY	–	–	–	−0.0259 ***	−0.0253 ***
	–	–	–	(−2.96)	(−2.79)
L1_OWNC	–	–	–	−0.0002	−0.0002
	–	–	–	(−0.46)	(−0.43)
L1_CHAEBOL_KFTC	–	–	–	0.0055	0.0054
	–	–	–	(1.59)	(1.58)
L1_RCASH	–	–	–	–	0.0129
	–	–	–	–	(0.85)
L1_CURRENT_RATIO	–	–	–	–	−0.0004
	–	–	–	–	(−0.46)
Constant	0.3005 ***	0.2966 ***	0.2784 ***	0.2817 ***	0.2818 ***
	(5.49)	(5.38)	(4.98)	(5.10)	(5.16)
Observations	8839	8839	8839	8839	8839
Groups	569	569	569	569	569
Within R^2	0.0208	0.0290	0.0290	0.0314	0.0316
F-statistic	4.40	5.69	5.57	5.61	5.38
Panel B. Dependent variable: REM_CFO					
DIV_YIELD	−0.6522 ***	−0.5611 ***	−0.5257 ***	−0.5274 ***	−0.5270 ***
	(−11.84)	(−11.70)	(−11.60)	(−11.74)	(−11.76)
L1_SIZE	0.0124 ***	0.0121 ***	0.0107 ***	0.0101 ***	0.0103 ***
	(4.21)	(4.86)	(4.68)	(4.38)	(4.48)
L1_ROA	–	−0.2418 ***	−0.1938 ***	−0.1925 ***	−0.1934 ***
	–	(−12.38)	(−10.51)	(−10.39)	(−10.44)
L1_MTB	–	−0.0034 **	−0.0030 **	−0.0029 **	−0.0030 **
	–	(−2.54)	(−2.39)	(−2.35)	(−2.40)
L1_LEV	–	−0.0136	−0.0135	−0.0127	−0.0141
	–	(−1.46)	(−1.57)	(−1.46)	(−1.50)
L1_FCF	–	–	−0.1402 ***	−0.1395 ***	−0.1451 ***
	–	–	(−9.45)	(−9.40)	(−9.61)

Table 4. *Cont.*

	(1) Size	(2) Performance/Risk	(3) Cash-Flow Slack	(4) Governance/Institutional	(5) Liquidity
L1_TANGIBILITY	–	–	–	−0.0002	0.0018
	–	–	–	(−0.02)	(0.22)
L1_OWNC	–	–	–	0.0004	0.0004
	–	–	–	(0.80)	(0.87)
L1_CHAEBOL_KFTC	–	–	–	0.0143 ***	0.0142 ***
	–	–	–	(3.17)	(3.16)
L1_RCASH	–	–	–	–	0.0358 **
	–	–	–	–	(2.36)
L1_CURRENT_RATIO	–	–	–	–	−0.0007
	–	–	–	–	(−0.66)
Constant	−0.2978 ***	−0.2787 ***	−0.2463 ***	−0.2320 ***	−0.2366 ***
	(−4.24)	(−4.74)	(−4.47)	(−4.13)	(−4.24)
Observations	8839	8839	8839	8839	8839
Groups	569	569	569	569	569
Within R^2	0.0427	0.1205	0.1463	0.1480	0.1490
F-statistic	7.19	15.05	20.54	19.99	19.18
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm	Firm	Firm

Notes: This table reports phased-control fixed-effects baseline regressions for H1 using the common H2 Model 5 sample. Robust *t*-statistics clustered by firm are reported in parentheses. All controls are lagged one period. ** $p < 0.05$, *** $p < 0.01$.

Panel B presents a different pattern for real activities manipulation. Dividend yield is negative and highly significant in every REM_CFO specification. The coefficient moves from -0.6522 ($t = -11.84$) in the size-only specification to -0.5257 ($t = -11.60$) after adding performance, growth opportunities, leverage, and internal cash-flow slack. In Panel B, the DIV_YIELD coefficient then remains virtually unchanged across columns (3)–(5), moving from -0.5257 ($t = -11.60$) after controlling for cash-flow slack to -0.5274 ($t = -11.74$) after adding governance and chaebol-affiliation controls and -0.5270 ($t = -11.76$) after adding liquidity controls. This stability indicates that these additional controls do not explain the negative within-firm association between dividend yield and REM_CFO. The association is consistent with, but does not causally establish, the agency view linking payout commitments with less managerial discretion over cash.

Taken together, Table 4 shows a channel-specific pattern consistent with H1, although the coefficients in the two panels are not formally tested against one another here. Within firms, firm-years with higher dividend yield show no reliable association with accrual-based manipulation but show consistently lower real activity manipulation through operating cash flows. The baseline results therefore do not establish that dividend policy changes the composition of reporting discretion. Rather, this asymmetry motivates the H2 channel-allocation tests, which directly examine whether the within-firm relation between accrual-based and real reporting channels varies with dividend yield.

4.4. Cross-Channel Tests for H2

Hypothesis 2 is this paper's central empirical test, and Table 5 is the core evidence for the proposed channel-allocation pattern. Drawing on the trade-off framework in (Zang, 2012), the question is whether the within-firm relation between accrual-based earnings management and real activities manipulation varies with dividend yield. If AEM and REM function as alternative reporting instruments, payout commitments may be associated not only with the amount of discretion observed, but also with its configuration across reporting channels. Table 5 tests this using REM_CFO as the real activities outcome and AEM_MJONES as the accrual-management proxy. All columns include firm and year fixed effects, with standard errors clustered by firm. The table is organized as a phased-control design. Each column adds an economic channel that could otherwise explain the AEM–REM_CFO relation. Model 1 is the baseline. Model 2 adds performance and risk. Model 3

adds internal cash-flow slack. Model 4 adds governance and institutional structure. Model 5 adds balance-sheet liquidity.

Dividend policy is not related uniformly to earnings management across channels; the within-firm relation between accrual and real channels itself varies with dividend yield. The baseline result points to this pattern. In Model 1, AEM_MJONES is positive and highly significant ($\beta = 0.1716$, $t = 6.51$). Because the model includes an interaction between DIV_YIELD and AEM_MJONES, this coefficient is the estimated AEM–REM_CFO slope evaluated at zero dividend yield, which is also the 25th percentile of DIV_YIELD in the estimation sample. The focal coefficient is the interaction between DIV_YIELD and AEM_MJONES. That interaction is negative and statistically significant in every specification. In Model 1, the interaction is -2.6124 ($t = -2.57$). After adding lagged ROA, market-to-book, and leverage in Model 2, the coefficient falls in absolute value to -1.8389 but stays significant ($t = -2.01$). Some of the raw interaction is related to performance and risk. Those fundamentals do not account for the full H2 pattern on their own.

The interaction stays close to its Model 2 level as we add further controls. Adding free cash flow in Model 3 yields -1.9446 ($t = -2.13$). Adding tangibility, ownership concentration, and KFTC-based chaebol affiliation in Model 4 yields -1.9426 ($t = -2.12$). Adding cash holdings and the current ratio in Model 5 yields -1.9566 ($t = -2.15$, $p = 0.032$). Our sample remains unchanged across all five specifications, at 8839 firm-year observations, so this stability is not a product of sample attrition. The within-R^2 rises from 0.0626 to 0.1640, while the interaction stays centered near -1.9 once we add the initial control set. This is the pattern our phased-control design is intended to show: no single block of firm fundamentals accounts for the interaction on its own. Our fully controlled estimate meets the conventional 5% threshold, but the five nested specifications serve as sensitivity checks for one focal association; they do not provide independent confirmations. Consistent with Section 3.3, we therefore treat Model 5 as our central estimate and read it alongside the payout-burden evidence in Table 7 and the robustness tests in Tables 9–11, not as a decisive result standing alone.

The marginal effects make the declining AEM–REM_CFO slope concrete. In the fully controlled model, the marginal effect of AEM_MJONES on REM_CFO is 0.1479 at zero dividend yield, 0.1258 at the median dividend yield, and 0.1014 at the 75th percentile. All three marginal effects are significant at the one-percent level, and the slope declines as dividend yield rises. This does not mean high-dividend firm-years stop showing an AEM–REM_CFO association. The positive association stays significant at all three reported payout points, but its size falls as dividend yield rises. Within firms, this pattern is less consistent with a simple complementary relation between the two channels and more consistent with a relation that becomes weaker at higher dividend yield.

The control variables give the interpretation some economic grounding. Lagged ROA is large, negative, and highly significant across Models 2–5, consistent with stronger operating performance being associated with less need for abnormal CFO-based activity. Lagged free cash flow is also negative and highly significant once introduced, consistent with internal cash generation as an important correlate of REM_CFO. Market-to-book is negative and significant. Leverage is weakly negative. These controls matter because they help distinguish the estimated association of dividend policy, proxied by dividend yield, from associations attributable to profitability, growth opportunities, capital structure, or internal funds. The interaction remains significant after these firm characteristics are included.

The governance and liquidity blocks need careful reading. Ownership concentration and tangibility do not explain REM_CFO in these specifications. KFTC-based chaebol affiliation enters positively and significantly in Models 4 and 5, indicating that chaebol-affiliated firm-years show higher conditional REM_CFO once the other controls and fixed effects are included. This is an institutional-level pattern. It is not direct evidence that chaebol firms

sit outside capital-market discipline, and the small chaebol subsample counsels caution here. Cash holdings enter positively and significantly in Model 5. The current ratio is not significant. Liquidity is not irrelevant here; the dividend-yield interaction stays significant alongside both cash-flow and balance-sheet liquidity controls, which weighs against a simple liquidity-driven account of the H2 pattern.

Table 5. Phased-control evidence for H2: dividend yield, AEM, and REM_CFO.

	(1) Baseline	(2) Performance/Risk	(3) Cash-Flow Slack	(4) Governance/Institutional	(5) Liquidity
Panel A. Focal variables and interaction					
DIV_YIELD	−0.5014 ***	−0.4627 ***	−0.4214 ***	−0.4223 ***	−0.4212 ***
	(−7.70)	(−7.60)	(−7.16)	(−7.20)	(−7.21)
AEM_MJONES	0.1716 ***	0.1468 ***	0.1485 ***	0.1482 ***	0.1479 ***
	(6.51)	(5.82)	(6.05)	(6.03)	(6.02)
DIV_YIELD × AEM_MJONES	−2.6124 **	−1.8389 **	−1.9446 **	−1.9426 **	−1.9566 **
	(−2.57)	(−2.01)	(−2.13)	(−2.12)	(−2.15)
Panel B. Lagged firm controls					
L1_SIZE	0.0135 ***	0.0131 ***	0.0117 ***	0.0111 ***	0.0113 ***
	(4.71)	(5.39)	(5.27)	(4.93)	(5.02)
L1_ROA	–	−0.2350 ***	−0.1867 ***	−0.1850 ***	−0.1859 ***
	–	(−11.97)	(−10.01)	(−9.87)	(−9.92)
L1_MTB	–	−0.0036 ***	−0.0032 **	−0.0031 **	−0.0032 **
	–	(−2.71)	(−2.56)	(−2.51)	(−2.55)
L1_LEV	–	−0.0166 *	−0.0166 *	−0.0159 *	−0.0176 *
	–	(−1.81)	(−1.95)	(−1.86)	(−1.91)
L1_FCF	–	–	−0.1407 ***	−0.1404 ***	−0.1458 ***
	–	–	(−9.48)	(−9.46)	(−9.70)
L1_TANGIBILITY	–	–	–	0.0030	0.0048
	–	–	–	(0.38)	(0.60)
L1_OWNC	–	–	–	0.0004	0.0005
	–	–	–	(0.88)	(0.95)
L1_CHAEBOL_KFTC	–	–	–	0.0136 ***	0.0135 ***
	–	–	–	(3.01)	(3.00)
L1_RCASH	–	–	–	–	0.0342 **
	–	–	–	–	(2.31)
L1_CURRENT_RATIO	–	–	–	–	−0.0007
	–	–	–	–	(−0.70)
Constant	−0.3628 ***	−0.3385 ***	−0.2982 ***	−0.2833 ***	−0.2892 ***
	(−4.82)	(−5.44)	(−5.23)	(−4.85)	(−4.97)
Panel C. Marginal effect of AEM_MJONES at DIV_YIELD percentiles					
P25: DIV_YIELD = 0.0000	0.1716 ***	0.1468 ***	0.1485 ***	0.1482 ***	0.1479 ***
	(6.51)	(5.82)	(6.05)	(6.03)	(6.02)
Median: DIV_YIELD = 0.0113	0.1421 ***	0.1260 ***	0.1265 ***	0.1262 ***	0.1258 ***
	–	(6.02)	(6.19)	(6.17)	(6.16)
P75: DIV_YIELD = 0.0238	0.1095 ***	0.1031 ***	0.1022 ***	0.1020 ***	0.1014 ***
	–	(4.77)	(4.76)	(4.75)	(4.74)
Panel D. Fixed effects and diagnostics					
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm	Firm	Firm
Observations	8839	8839	8839	8839	8839
Number of clusters	569	569	569	569	569
Within R^2	0.0626	0.1354	0.1615	0.1630	0.1640
ρ	0.5106	0.4344	0.3851	0.3857	0.3866

Notes: This table reports phased-control fixed-effects estimates for H2 using REM_CFO as the dependent variable, DIV_YIELD as the market-based dividend-yield measure, and AEM_MJONES as the AEM proxy. Robust *t*-statistics are in parentheses. Standard errors are clustered by firm. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

These estimates provide our central quantitative evidence for H2. We find that the within-firm relation between accrual-based and real reporting instruments varies with dividend yield: as dividend yield rises, the conditional AEM–REM_CFO relation becomes progressively weaker. In our fully controlled model, the marginal effect $\partial REM\_CFO/\partial AEM = \beta_{AEM} + \beta_{DIV\times AEM} DIV\_YIELD$ falls from 0.1479 at zero dividend yield to 0.1258 at the median and 0.1014 at the 75th percentile. This decline is economically meaningful: the 75th-percentile estimate is roughly one-third lower than the zero-yield estimate. Our results are consistent with a departure from a uniform, channel-independent association: accrual and CFO-based real-activity measures become less complementary as dividend yield rises. This pattern does not establish that managers deliberately reallocate discretion between channels.

4.5. Payout Status, Payout Intensity, Payout Burden, and H3a–H3b

4.5.1. Payout Intensity and H3a

H3a asks whether the cross-channel pattern in H2 becomes stronger among dividend payers and firms with higher relative payout intensity. Larger or more visible payouts may be associated with higher costs of disappointing investors. In a channel-allocation framework, higher payout intensity would correspond to a stronger interaction between dividend yield and accrual-based earnings management when explaining REM_CFO.

Table 6 tests this prediction in five steps. Column (1) reproduces the fully controlled H2 interaction in the H3a parent sample. The interaction between DIV_YIELD and AEM_MJONES is negative and significant, consistent with the H2 evidence that the AEM–REM_CFO relation differs across levels of dividend yield. Columns (2) and (3) then ask whether this relation becomes stronger among actual dividend payers and among the highest-yield dividend payers. It does not. In the dividend-payer sample, the interaction is small and insignificant. In the high-yield subsample, the interaction is positive but also insignificant. These results indicate that the full-sample interaction is not amplified simply by restricting attention to firms with stronger observed payout yield.

Columns (4) and (5) provide the formal payout-intensity tests corresponding to Equation (12). The seven non-constant coefficients in that equation are the two main reporting-channel variables, the payout-intensity moderator, the three two-way interactions, and the triple interaction. The focal H3a coefficient is the triple interaction, θ_7, because it tests whether the dividend-yield interaction with AEM_MJONES varies with payout intensity. Column (4) uses a high-dividend-yield indicator among dividend payers. The estimated θ_7 is negative but statistically insignificant, and the total high-yield interaction is also insignificant. Column (5) replaces the high-yield indicator with the continuous payout ratio. The corresponding θ_7 is again negative but statistically insignificant. The marginal-effect estimates tell the same story. AEM_MJONES remains positively related to REM_CFO in several specifications, but the evidence does not show that the relation weakens more strongly as relative payout intensity rises.

On balance, our results in Table 6 do not support H3a. Our evidence supports the broader channel-allocation pattern in H2, but we do not find that high-yield status or the payout ratio makes that pattern stronger within dividend-paying firms. We do not estimate incremental moderation by relative payout intensity precisely enough to support H3a.

Table 6. Payout status, relative payout intensity, and the AEM–REM_CFO channel (H3a).

	(1) Full Sample	(2) Payers Only	(3) High DY	(4) High-DY Interaction	(5) Payout Ratio
Panel A. Focal variables and payout-intensity interactions					
DIV_YIELD	−0.4212 ***	−0.4010 ***	−0.3507 ***	−1.5160 ***	−0.3730 ***
	(−7.21)	(−5.59)	(−2.87)	(−5.09)	(−4.76)
AEM_MJONES	0.1479 ***	0.0566	−0.0002	−0.0145	0.0191
	(6.02)	(1.52)	(−0.00)	(−0.19)	(0.43)
DIV_YIELD × AEM_MJONES	−1.9566 **	0.1906	1.5192	8.6616	0.6979
	(−2.15)	(0.17)	(0.70)	(1.31)	(0.54)
High DY	–	–	–	−0.0179 ***	–
	–	–	–	(−3.69)	–
DIV_YIELD × High DY	–	–	–	1.2454 ***	–
	–	–	–	(4.06)	–
AEM_MJONES × High DY	–	–	–	0.0529	–
	–	–	–	(0.52)	–

Table 6. *Cont.*

	(1) Full Sample	(2) Payers Only	(3) High DY	(4) High-DY Interaction	(5) Payout Ratio
DIV_YIELD × *AEM_MJONES* × *High DY*	–	–	–	−8.3616	–
	–	–	–	(−1.21)	–
Total high-DY interaction	–	–	–	0.3001	–
	–	–	–	(0.18)	–
DIV_PAYOUT	–	–	–	–	0.0172 ***
	–	–	–	–	(5.19)
DIV_YIELD × *DIV_PAYOUT*	–	–	–	–	0.0320
	–	–	–	–	(0.38)
AEM_MJONES × *DIV_PAYOUT*	–	–	–	–	0.0806
	–	–	–	–	(0.95)
DIV_YIELD × *AEM_MJONES* × *DIV_PAYOUT*	–	–	–	–	−2.1362
	–	–	–	–	(−1.13)
Panel B. Conditional marginal effects of AEM_MJONES					
Low payout point	0.1479 ***	0.0585 **	0.0445	0.0734 **	0.0366
	(6.02)	(2.02)	(0.91)	(2.39)	(1.33)
Median payout point	0.1258 ***	0.0599 **	0.0542	0.0473	0.0400
	(6.16)	(2.44)	(1.30)	(1.47)	(1.52)
High payout point	0.1014 ***	0.0622 ***	0.0709 *	–	0.0463 *
	(4.74)	(2.65)	(1.82)	–	(1.77)
Constant	−0.2727 *** (−4.98)	−0.3323 *** (−5.09)	−0.2795 ** (−2.08)	−0.3105 *** (−4.76)	−0.3291 *** (−5.90)
Panel C. Fixed effects and diagnostics					
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Lagged controls	Yes	Yes	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm	Firm	Firm
Observations	8839	6235	2078	6235	5546
Number of clusters	569	499	356	499	488
Within R^2	0.1640	0.1642	0.1531	0.1695	0.1929
ρ	0.3866	0.4493	0.5028	0.4451	0.4477

Notes: This table reports fixed-effects estimates for H3a using REM_CFO as the dependent variable. Equation (12) contains seven non-constant core coefficients: DIV_YIELD (θ_1), AEM_MJONES (θ_2), payout intensity (θ_3), DIV_YIELD × AEM_MJONES (θ_4), DIV_YIELD × payout intensity (θ_5), AEM_MJONES × payout intensity (θ_6), and DIV_YIELD × AEM_MJONES × payout intensity (θ_7). The focal H3a coefficient is θ_7, because it tests whether relative payout intensity changes the AEM–REM_CFO channel captured by θ_4. Columns (4) and (5) are the formal Equation (12) tests: Column (4) uses High DY as the payout-intensity moderator, and Column (5) uses DIV_PAYOUT. In Column (4), Total high-DY interaction is the post-estimation linear combination $\theta_4 + \theta_7$. It equals the net DIV_YIELD × AEM_MJONES interaction for high-yield dividend payers. The estimate is 0.3001 and is statistically insignificant. In both formal H3a columns, θ_7 is negative but statistically insignificant. The estimates therefore do not reject the null of no incremental moderation by relative payout intensity. Columns (1)–(3) are diagnostic subsample or parent-sample specifications, not full seven-coefficient H3a tests. All models include firm and year fixed effects and lagged controls for size, ROA, market-to-book, leverage, free cash flow, tangibility, ownership concentration, KFTC-based chaebol affiliation, cash holdings, and current ratio. Robust *t*-statistics are in parentheses. Panel B reports conditional marginal effects of AEM_MJONES at the indicated dividend-yield values. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.5.2. Payout Burden and H3b

H3b asks whether the relationship between the two earnings-management channels differs when dividends absorb more of the resources available inside the firm. The primary

operating-profit specification shows a negative and statistically significant interaction (-0.1672, $p = 0.0020$). Because operating profit is not used to construct REM_CFO, this estimate provides the primary H3b evidence. The free-cash-flow (-0.2033, $p = 0.0057$) and operating-cash-flow (-0.3062, $p = 0.0001$) interactions are also negative and statistically significant, but they are treated only as corroborating evidence because both burden measures share an operating-cash-flow component with REM_CFO (Table 7).

In plain terms, when dividends are large relative to operating profit, accrual-based manipulation and abnormal operating-cash-flow activity move together less strongly. The free-cash-flow and operating-cash-flow specifications point in the same direction, but their shared construction component means that they do not provide independent evidence. This pattern is consistent with a greater trade-off between the two channels under a heavy payout burden; it does not indicate the disappearance of earnings management.

Accordingly, support for H3b rests primarily on the operating-profit specification. The free-cash-flow and operating-cash-flow specifications corroborate its direction but remain subject to mechanical overlap with the outcome. The practical message is that payout burden is associated not only with the amount paid, but also with whether the firm's current resources can comfortably support that payment. These are within-firm associations and do not establish that a heavier dividend burden leads managers to change methods.

Table 7. Payout burden relative to internal resources (H3b).

	(1) DIVT/FCF (Corroborating)	(2) DIVT/OPROF (Primary)	(3) DIVT/OCF (Corroborating)
Panel A. Focal variables and interaction			
Payout burden	0.0391 ***	0.0232 ***	0.0477 ***
	(9.54)	(8.21)	(11.15)
AEM_MJONES	−0.0285	0.0924 ***	−0.0203
	(−1.19)	(3.42)	(−0.83)
Payout burden × AEM_MJONES	−0.2033 ***	−0.1672 ***	−0.3062 ***
	(−2.78)	(−3.10)	(−3.95)
Panel B. Controls			
L1_SIZE	0.0122 ***	0.0137 ***	0.0120 ***
	(5.81)	(6.29)	(5.65)
L1_ROA	−0.2071 ***	−0.1361 ***	−0.2062 ***
	(−11.39)	(−6.84)	(−11.32)
L1_MTB	−0.0048 ***	−0.0045 ***	−0.0047 ***
	(−4.53)	(−3.72)	(−4.45)
L1_LEV	0.0091	0.0044	0.0091
	(1.12)	(0.56)	(1.13)
L1_FCF	−0.1203 ***	−0.1001 ***	−0.1200 ***
	(−9.06)	(−7.10)	(−9.05)
L1_TANGIBILITY	0.0117 *	−0.0044	0.0117 *
	(1.66)	(−0.59)	(1.67)
L1_OWNC	0.0005	0.0006	0.0005
	(1.02)	(1.53)	(1.03)
L1_CHAEBOL_KFTC	0.0101 **	0.0126 ***	0.0101 **
	(2.38)	(2.83)	(2.37)
L1_RCASH	−0.0087	0.0351 **	−0.0077
	(−0.67)	(2.56)	(−0.61)
L1_CURRENT_RATIO	0.0009	0.0004	0.0009
	(1.13)	(0.44)	(1.06)
Constant	−0.3597 ***	−0.3922 ***	−0.3549 ***
	(−6.61)	(−7.03)	(−6.44)
Panel C. Fixed effects and diagnostics			
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm
Observations	7093	7421	7093
Number of clusters	557	554	557
Within R^2	0.2137	0.1215	0.2159
ρ	0.4183	0.4585	0.4153
Interaction test p-value	0.0057	0.0020	0.0001

Notes: This table reports firm fixed-effects regressions of REM_CFO on payout burden, AEM_MJONES, and their interaction, with the full H2 controls and year fixed effects. DIVT is common plus preferred dividends. The three burden measures scale DIVT by free cash flow, operating profit, or operating cash flow. The operating-profit specification is the primary H3b test because it does not share an operating-cash-flow component with REM_CFO. The other two specifications are corroborating tests because their burden measures share that component with the dependent variable. All burden measures are winsorized at the 1st and 99th percentiles. Robust t-statistics are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.6. Governance, Exploratory Chaebol Analysis, and Financial Flexibility

Table 8 reports the governance, exploratory chaebol, and financial-flexibility analyses. H4a asks whether the H2 pattern varies with ownership concentration. The chaebol column is exploratory, while H4b predicts that the weakening associated with dividend yield is less pronounced at higher levels of cash holdings. All three columns use the same common sample inherited from the H3a parent sample, with 8839 firm-year observations and 569 firm clusters. The dependent variable is REM_CFO, the market-based dividend-yield variable is DIV_YIELD, and the accrual-management proxy is AEM_MJONES. Each model includes firm and year fixed effects, standard errors clustered by firm, and the same lagged firm-level controls reported in Panel B of the table. This common-sample design ensures that differences across columns arise from the moderator, not changes in the estimation sample.

Column (1) uses lagged ownership concentration, L1_OWNC, to capture monitoring intensity. Column (2) retains L1_CHAEBOL_KFTC as an exploratory indicator of organizational form and potential access to internal capital markets. Column (3) uses L1_RCASH to capture cash-based financial flexibility. Because the design does not include a separate financing-constraint index, H4b concerns liquidity-based flexibility, not financing constraints in general. The Korean setting allows the three conditioning forces to be examined within the same framework.

Column (1) shows no reliable moderation by ownership concentration. The baseline interaction between DIV_YIELD and AEM_MJONES remains negative and marginally significant, with a coefficient of -1.8433 ($t = -1.89$). However, the triple interaction DIV_YIELD $\times$ AEM_MJONES $\times$ L1_OWNC is small and statistically insignificant, with a coefficient of -0.3038 ($t = -0.59$) and a formal test p-value of 0.5534. The conditional marginal effects in Panel C lead to the same conclusion. For ownership, the low and high moderator values are 0 and 1.29. As dividend yield rises from 0 to 0.0238, the marginal effect of AEM_MJONES declines from 0.1486 to 0.1048 at the low ownership value and from 0.1493 to 0.0962 at the high value. Because this test uses the full 8839-observation sample, the null is comparatively informative, although it is not evidence that the true moderation effect is exactly zero.

Column (2) is an exploratory chaebol analysis retained for transparency. The triple interaction is -0.0422 ($t = -0.01$; $p = 0.9931$), and the subgroup marginal effects are imprecise. Chaebol affiliation accounts for only 267 firm-years, or 3.02% of the estimation sample. This small affiliated subsample limits statistical power, so the estimates cannot distinguish positive, negative, or null moderation. We therefore draw no directional conclusion, and the result is not evidence of no effect. H4a is evaluated only from the ownership-concentration analysis in Column (1) and is not supported.

Column (3) tests H4b. The baseline DIV_YIELD $\times$ AEM_MJONES interaction is negative and strongly significant, with a coefficient of -4.1338 ($t = -3.14$). The triple interaction with L1_RCASH is positive, with a coefficient of 30.0474 ($t = 2.03$) and a formal test p-value of 0.0433. The positive sign indicates that the negative dividend-yield interaction with AEM_MJONES is less pronounced at higher levels of cash holdings. At the 75th percentile of dividend yield, the marginal effect of AEM_MJONES is 0.0806 at low RCASH and 0.1147 at high RCASH. The relation therefore declines more across dividend-yield levels when internal liquidity is low. The estimate is directionally consistent with H4b but should be treated as suggestive because its statistical significance is modest and the result comes from one of several heterogeneity tests.

Table 8. Governance, exploratory chaebol analysis, and financial flexibility.

	(1) Ownership Concentration	(2) Chaebol Affiliation (Exploratory)	(3) Cash Flexibility
Panel A. Formal and exploratory interactions			
DIV_YIELD	−0.4054 ***	−0.4273 ***	−0.3071 ***
	(−6.67)	(−7.27)	(−3.99)
AEM_MJONES	0.1486 ***	0.1475 ***	0.1651 ***
	(5.51)	(5.92)	(4.64)
DIV_YIELD × AEM_MJONES	−1.8433 *	−1.9425 **	−4.1338 ***
	(−1.89)	(−2.12)	(−3.14)
Moderator	0.0009	0.0098 *	0.0501 **
	(1.18)	(1.79)	(2.03)
DIV_YIELD × Moderator	−0.0187	0.2126	−1.6812 *
	(−0.65)	(0.79)	(−1.90)
AEM_MJONES × Moderator	0.0005	0.0130	−0.2266
	(0.04)	(0.12)	(−0.65)
DIV_YIELD × AEM_MJONES × Moderator	−0.3038	−0.0422	30.0474 **
	(−0.59)	(−0.01)	(2.03)
Panel B. Governance, flexibility, and firm-level controls			
L1_CHAEBOL_KFTC	0.0135 ***	–	0.0135 ***
	(2.99)	–	(3.02)
L1_OWNC	–	0.0005	0.0005
	–	(0.94)	(0.95)
L1_RCASH	0.0341 **	0.0344 **	–
	(2.30)	(2.32)	–
L1_SIZE	0.0114 ***	0.0113 ***	0.0113 ***
	(5.08)	(4.99)	(4.99)
L1_ROA	−0.1856 ***	−0.1859 ***	−0.1852 ***
	(−9.90)	(−9.93)	(−9.93)
L1_MTB	−0.0033 **	−0.0032 **	−0.0032 **
	(−2.57)	(−2.54)	(−2.55)
L1_LEV	−0.0176 *	−0.0177 *	−0.0178 *
	(−1.90)	(−1.91)	(−1.92)
L1_FCF	−0.1459 ***	−0.1458 ***	−0.1459 ***
	(−9.70)	(−9.70)	(−9.71)
L1_TANGIBILITY	0.0047	0.0049	0.0048
	(0.59)	(0.61)	(0.59)
L1_CURRENT_RATIO	−0.0007	−0.0007	−0.0007
	(−0.67)	(−0.71)	(−0.67)
Constant	−0.2924 ***	−0.2888 ***	−0.2895 ***
	(−5.04)	(−4.94)	(−4.96)
Panel C. Conditional marginal effects of AEM_MJONES			
DIV_YIELD = 0, moderator low	0.1486 ***	0.1475 ***	0.1587 ***
	(5.51)	(5.92)	(5.43)
DIV_YIELD = 0, moderator high	0.1493 ***	0.1606	0.1428 ***
	(6.05)	(1.55)	(5.55)
DIV_YIELD = 0.0113, moderator low	0.1278 ***	0.1256 ***	0.1215 ***
	(5.69)	(6.06)	(4.80)
DIV_YIELD = 0.0113, moderator high	0.1241 ***	0.1381 *	0.1294 ***
	(6.05)	(1.65)	(6.15)
DIV_YIELD = 0.0238, moderator low	0.1048 ***	0.1013 ***	0.0806 ***
	(4.52)	(4.69)	(3.00)
DIV_YIELD = 0.0238, moderator high	0.0962 ***	0.1134	0.1147 ***
	(4.42)	(1.16)	(5.24)
Panel D. Fixed effects and diagnostics			
Firm and year FE	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm
Observations	8839	8839	8839
Number of clusters	569	569	569
Within R^2	0.1643	0.1641	0.1651
ρ	0.3883	0.3863	0.3869
Triple-interaction test p-value	0.5534	0.9931	0.0433

Notes: This table uses REM_CFO as the dependent variable, DIV_YIELD as the market-based dividend-yield measure, and AEM_MJONES as the accrual-management proxy. Column (1) tests H4a using lagged ownership concentration, Column (2) reports an exploratory chaebol analysis retained for transparency, and Column (3) tests H4b using lagged cash holdings. Only 267 firm-years are chaebol-affiliated, so Column (2) has limited power and supports no directional conclusion. Panel C evaluates DIV_YIELD at 0, its median (0.0113), and its 75th percentile (0.0238). The low and high moderator values are 0 and 1.29 for L1_OWNC, 0 and 1 for L1_CHAEBOL_KFTC, and 0.0283 and 0.0982 for L1_RCASH. A positive cash triple interaction indicates that the negative interaction is less pronounced at higher levels of cash holdings. The three moderator tests imply a Bonferroni family-wise threshold of $0.05/3 = 0.0167$; the cash triple-interaction p-value of 0.0433 is nominally significant at 5% but does not meet that corrected threshold. Firm-clustered t-statistics are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.7. Robustness and Sensitivity Analyses

Tables 9–11 report our sensitivity and interpretation checks for the cross-channel interaction specification. In Table 9, we vary the real earnings-management outcome while holding the modified-Jones accrual-based earnings-management proxy fixed and retaining the full set of lagged controls. We find that the dividend-yield interaction with modified-Jones discretionary accruals is statistically insignificant across all three alternative real-activity outcomes. These outcomes are abnormal production costs ($\beta = 4.0253$, $t = 0.96$, $p = 0.3378$), abnormal SG&A/discretionary expense behavior ($\beta = -0.9127$, $t = -0.99$,

$p = 0.3248$), and the aggregate real-activities index ($\beta = 1.1560$, $t = 0.26$, $p = 0.7955$). Economically, this result is important because it shows that our cross-channel pattern does not extend uniformly to every real-activity margin. The result is consistent with the channel ranking developed in Section 2.2: sales timing, credit terms, collections, and working-capital decisions can alter operating cash flow within the reporting year, while production and SG&A choices can involve inventory, capacity, customer-development, personnel, and other costs that extend beyond the current payout cycle. Combining the three margins in REM_INDEX may also dilute an association concentrated in operating cash flow. The insignificant interactions for the production and discretionary-expense measures therefore limit our result to the abnormal operating-cash-flow channel.

Table 10 holds abnormal operating cash flows fixed as the real earnings-management outcome and varies the accrual-based earnings-management proxy. The dividend-yield interaction is negative across the Jones, Kasznik, and Kothari accrual models. The corresponding estimates are -1.9421 for Jones discretionary accruals ($t = -2.14$, $p = 0.0329$), -4.4014 for Kasznik discretionary accruals ($t = -3.38$, $p = 0.0008$), and -1.4814 for performance-adjusted Kothari discretionary accruals ($t = -1.65$, $p = 0.0992$). The signs are consistent, but the magnitudes vary materially, and the Kothari estimate is only marginally significant. The sample is stable at 8839 firm-years, and the within-R^2 values remain close to 0.16–0.17. Overall, using different accrual models makes it less likely that the main finding is driven by the choice of model, although this possibility cannot be ruled out completely. Put simply, the positive link between accrual-based discretion and manipulation through operating activities is weaker in firm-years with higher dividend yield. The control estimates are similar across the models, suggesting that the finding is not driven by differences in the firm characteristics included in the analysis. However, unmeasured firm-level factors that change over time could still affect the results.

Table 11 tests whether the inference depends on the payout-policy measure. The dividend-payer indicator produces a negative interaction with modified-Jones discretionary accruals ($\beta = -0.1280$, $t = -3.56$, $p = 0.0004$), which is consistent with the main cross-channel interpretation. By contrast, the dividend payout ratio ($\beta = 0.0272$, $t = 0.77$, $p = 0.4395$) and high-yield indicator ($\beta = 0.0151$, $t = 0.29$, $p = 0.7720$) are not associated with significant interaction estimates. The inference is therefore sensitive to the payout measure: it appears for dividend-paying status but not for the payout ratio or high-yield classification. Because these measures capture different dimensions of payout policy, the estimates do not establish why the dividend-payer specification differs from the other two.

Overall, Tables 9–11 show whether the findings hold when measures change. Other real-activity measures give weaker results, so the evidence mainly concerns operating cash flow. Different accrual measures still show a negative relationship, but its strength and reliability vary. For payout, only the dividend-payer test gives a reliable negative result. Thus, the weaker cross-channel relation is not robust across payout-policy measures: it is supported for dividend-paying status but not for the payout ratio or high-yield classification. These measures represent payout status and relative payout intensity, not internal-resource payout burden.

Table 9. Robustness to alternative REM proxies.

	(1) REM_PROD	(2) REM_SGA	(3) REM_INDEX
DIV_YIELD	−0.4616	−0.2412 ***	−1.1240 ***
	(−1.21)	(−3.15)	(−2.91)
AEM_MJONES	0.0062	−0.0193	0.1349
	(0.08)	(−0.81)	(1.57)
DIV_YIELD × AEM_MJONES	4.0253	−0.9127	1.1560
	(0.96)	(−0.99)	(0.26)
L1_SIZE	−0.1106 ***	0.0357 ***	−0.0636 ***
	(−5.96)	(7.62)	(−3.12)
L1_ROA	0.5222 ***	−0.0303	0.3060 ***
	(6.15)	(−1.35)	(3.62)
L1_MTB	0.0185 ***	−0.0083 ***	0.0070
	(2.90)	(−4.53)	(1.02)
L1_LEV	0.1167 *	−0.0028	0.0962
	(1.86)	(−0.17)	(1.54)
L1_FCF	0.3056 ***	−0.0449 ***	0.1148 *
	(4.94)	(−3.15)	(1.79)
L1_TANGIBILITY	−0.1002 *	−0.0106	−0.1061 *
	(−1.69)	(−0.65)	(−1.78)
L1_OWNC	−0.0045	−0.0000	−0.0041
	(−1.40)	(−0.02)	(−1.18)
L1_CHAEBOL_KFTC	0.0044	0.0058	0.0237
	(0.17)	(1.10)	(0.99)
L1_RCASH	0.1023	−0.0418	0.0948
	(1.13)	(−1.58)	(1.02)
L1_CURRENT_RATIO	−0.0230 ***	0.0038 *	−0.0199 ***
	(−4.21)	(1.78)	(−3.50)
Constant	3.0071 ***	−0.9526 ***	1.7819 ***
	(6.57)	(−7.75)	(3.60)
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm
Observations	8839	8839	8839
Number of clusters	569	569	569
Within R^2	0.0902	0.1295	0.0375
ρ	0.8117	0.8903	0.8267
Interaction test p-value	0.3378	0.3248	0.7955

Notes: This table varies the dependent REM proxy while holding the accrual-based earnings-management proxy fixed as AEM_MJONES. All models use the H4 common sample, include firm and year fixed effects, and cluster standard errors by firm. Robust t-statistics are in parentheses. * $p < 0.10$, *** $p < 0.01$.

Table 10. Robustness to alternative AEM proxies.

	(1) AEM_JONES	(2) AEM_KASZNIK	(3) AEM_KOTHARI
DIV_YIELD	−0.4221 ***	−0.3240 ***	−0.4474 ***
	(−7.22)	(−5.21)	(−7.65)
AEM proxy	0.1472 ***	0.2074 ***	0.1037 ***
	(5.99)	(6.28)	(4.08)
DIV_YIELD × AEM proxy	−1.9421 **	−4.4014 ***	−1.4814 *
	(−2.14)	(−3.38)	(−1.65)
L1_SIZE	0.0113 ***	0.0110 ***	0.0110 ***
	(5.02)	(4.94)	(4.83)
L1_ROA	−0.1860 ***	−0.1824 ***	−0.1878 ***
	(−9.93)	(−9.71)	(−9.97)
L1_MTB	−0.0032 **	−0.0031 **	−0.0031 **
	(−2.55)	(−2.46)	(−2.47)
L1_LEV	−0.0176 *	−0.0190 **	−0.0170 *
	(−1.90)	(−2.08)	(−1.83)

Table 10. *Cont.*

	(1) AEM_JONES	(2) AEM_KASZNIK	(3) AEM_KOTHARI
L1_FCF	−0.1458 ***	−0.1479 ***	−0.1464 ***
	(−9.69)	(−9.78)	(−9.69)
L1_TANGIBILITY	0.0048	0.0056	0.0040
	(0.59)	(0.70)	(0.49)
L1_OWNC	0.0005	0.0004	0.0004
	(0.95)	(0.84)	(0.91)
L1_CHAEBOL_KFTC	0.0135 ***	0.0136 ***	0.0138 ***
	(3.00)	(3.04)	(3.07)
L1_RCASH	0.0342 **	0.0381 **	0.0348 **
	(2.31)	(2.56)	(2.32)
L1_CURRENT_RATIO	−0.0007	−0.0008	−0.0008
	(−0.70)	(−0.81)	(−0.73)
Constant	−0.2728 ***	−0.2692 ***	−0.2625 ***
	(−4.98)	(−4.94)	(−4.71)
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm
Observations	8839	8839	8839
Number of clusters	569	569	569
Within R^2	0.1638	0.1696	0.1560
ρ	0.3868	0.3822	0.3876
Interaction test p-value	0.0329	0.0008	0.0992

Notes: This table varies the AEM proxy while holding the REM proxy fixed as REM_CFO. All models use the H4 common sample, include firm and year fixed effects, and cluster standard errors by firm. Robust t-statistics are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 11. Robustness to alternative payout-policy measures.

	(1) DIV_PAYOUT	(2) DIV_PAYER	(3) HIGH_YIELD
Payout-policy measure	0.0154 ***	−0.0162 ***	−0.0157 ***
	(8.82)	(−6.64)	(−4.83)
AEM_MJONES	0.0062	0.1853 ***	0.0293
	(0.26)	(6.08)	(0.71)
Payout-policy measure × AEM_MJONES	0.0272	−0.1280 ***	0.0151
	(0.77)	(−3.56)	(0.29)
L1_SIZE	0.0117 ***	0.0133 ***	0.0118 ***
	(5.18)	(6.05)	(3.95)
L1_ROA	−0.1333 ***	−0.1710 ***	−0.2867 ***
	(−6.71)	(−9.18)	(−8.98)
L1_MTB	−0.0042 ***	−0.0021 *	−0.0061 ***
	(−3.36)	(−1.73)	(−3.74)
L1_LEV	−0.0151 *	−0.0250 ***	−0.0153
	(−1.91)	(−2.80)	(−1.46)
L1_FCF	−0.0918 ***	−0.1450 ***	−0.0829 ***
	(−6.57)	(−9.75)	(−5.05)
L1_TANGIBILITY	0.0002	0.0066	−0.0209 **
	(0.03)	(0.84)	(−2.21)
L1_OWNC	0.0003	0.0006	0.0000
	(0.69)	(1.31)	(0.05)
L1_CHAEBOL_KFTC	0.0124 ***	0.0113 ***	0.0092 **
	(2.82)	(2.63)	(2.18)
L1_RCASH	0.0287 **	0.0357 **	0.0578 ***
	(2.11)	(2.43)	(2.91)
L1_CURRENT_RATIO	0.0005	−0.0009	0.0013
	(0.57)	(−0.83)	(1.07)
Constant	−0.3506 ***	−0.3196 ***	−0.3142 ***
	(−6.30)	(−6.02)	(−4.29)

Table 11. *Cont.*

	(1) DIV_PAYOUT	(2) DIV_PAYER	(3) HIGH_YIELD
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Clustered SEs	Firm	Firm	Firm
Observations	6699	8839	4130
Number of clusters	553	569	483
Within R^2	0.1338	0.1695	0.1614
ρ	0.4516	0.3940	0.4554
Interaction test p-value	0.4395	0.0004	0.7720

Notes: This table varies the payout-policy measure while holding REM_CFO and AEM_MJONES fixed. DIV_PAYER measures payout status. DIV_PAYOUT and HIGH_YIELD measure relative payout intensity; none of the three measures internal-resource payout burden. DIV_PAYOUT is the dividend payout ratio; DIV_PAYER equals one for firm-years with positive dividends and zero otherwise; HIGH_YIELD equals one for dividend payers in the top positive-yield tercile and zero for those in the bottom positive-yield tercile, excluding middle-tercile observations and non-payers. All models include firm and year fixed effects and cluster standard errors by firm. The sample differs across columns because DIV_PAYOUT and HIGH_YIELD are not observed for all H4 common-sample firm-years. Robust t-statistics are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5. Discussion

We interpret our findings using two views of dividend policy. The first is a uniform-monitoring view, under which dividend payments are associated with less cash under managerial control and greater outside scrutiny. If this view describes the data, accrual-based and real earnings manipulation should move in the same direction, and their relationship should vary little with dividend policy (Easterbrook, 1984; Jensen, 1986). The second is a relative-channel view, under which the observed relation between the two methods may vary because they differ in visibility and detection risk. Their relationship may therefore differ across dividend-yield levels (Roychowdhury, 2006; Zang, 2012). Our results compare these interpretations but show associations, not cause and effect or deliberate managerial reallocation.

H1 gives the first comparison. Dividend yield has no clear standalone link with AEM_MJONES, but it has a consistent negative link with REM_CFO. Under a uniform association, both measures would move in the same direction. Instead, the estimates indicate different associations across the two methods. Because the coefficients come from separate models, we cannot conclude that dividend policy changes the mix of earnings management. This cautions against a broad agency claim: less manipulation in one channel does not necessarily mean better overall reporting quality, because the observed relations of dividend policy with accounting and operating choices may differ.

H2 provides the more discriminating test and clearest separation between accounts. A uniform-monitoring account does not predict that the AEM–REM_CFO relation varies with dividend yield, whereas a relative-channel account does. Table 5 provides the evidence. The interaction between dividend yield and AEM_MJONES is negative in all five models, and the conditional relation falls from 0.1479 at zero dividend yield to 0.1014 at the 75th percentile. This one-third decline leaves the relation positive and significant. The pattern is consistent with differences in cross-channel configuration but does not establish managerial reallocation. Fixed effects show conditional within-firm co-movement but cannot establish decision sequence, intent, or causal direction. Firms may choose or maintain dividend yields in response to operating-cash-flow conditions that also shape REM_CFO and its relation to accrual measures, while market-value declines can independently raise dividend yield. Operating conditions, cash-flow selection, valuation shocks, distress, and other omitted firm-year factors therefore remain alternative explanations. Because the design cannot rule out these explanations, the supported claim is that the measured AEM–REM_CFO relation is weaker in higher-yield firm-years, not that higher dividend yield leads managers to replace one method with another.

The alternative REM tests establish an important boundary around this interpretation. The dividend-yield interaction is not statistically significant for abnormal production costs, abnormal SG&A expenses, or the aggregate REM index. This concentration in REM_CFO is consistent with dividends being cash distributions and with sales terms, collections, and working-capital choices having greater within-year flexibility than production or discretionary-spending commitments. However, the evidence does not show that this proposed timing and flexibility mechanism explains the coefficient. The result should therefore be interpreted as CFO-specific and not as a general pattern across all forms of real earnings management.

H3 separates payout status and relative payout intensity from the burden of funding dividends with internal resources. H3a asks whether the relation varies for dividend payers or with high-yield status and the payout ratio; H3b asks whether dividends are large relative to free cash flow, operating profit, or operating cash flow. The relative-channel view predicts stronger H3b evidence because lower internal-resource capacity should coincide more directly with difficulty maintaining dividend commitments than a firm's market position. Results support this difference. Table 6 shows that high-yield status and the payout ratio do not make the H2 interaction stronger among dividend-paying firms. Thus, H3a is not supported. For H3b, the operating-profit specification provides the primary evidence because operating profit is not used to calculate REM_CFO. The free-cash-flow and operating-cash-flow specifications point in the same direction but are treated only as corroborating because both share an operating-cash-flow component with REM_CFO.

H4 asks whether the pattern varies with oversight or cash reserves. Ownership concentration is not reliably associated with differences in the interaction, so H4a is not supported. The chaebol extension is exploratory and statistically inconclusive because only 267 affiliated firm-years provide limited power; it supports no conclusion about the presence, absence, or direction of moderation. The positive three-way interaction for cash holdings indicates that the negative dividend-yield interaction is less pronounced when firms hold more cash, as H4b predicts. Its p-value is 0.0433, so cash flexibility provides suggestive, not firm, evidence. We cannot say it is more important than careful monitoring.

Overall, these tests narrow our core H2 finding: the relation between AEM and REM_CFO becomes weaker as dividend yield rises. The negative dividend-yield–AEM interaction remains when we use alternative accrual measures, but it does not remain when we use alternative real earnings management measures. Our finding therefore applies mainly to the conditional relation between AEM and REM_CFO. We also observe a weaker AEM–REM_CFO relation among dividend-paying firms than among non-paying firms, but neither the payout ratio nor membership in the high-dividend-yield group strengthens this relation. For payout burden, the operating-profit measure provides the primary H3b test because it does not use operating cash flow, which is part of REM_CFO. The free-cash-flow and operating-cash-flow measures provide corroborating evidence subject to their shared construction component. These findings show relationships within firms, not cause and effect. Changes in business conditions may be associated simultaneously with dividends, accruals, and operating cash flow. Without an external event or another basis for causal inference, we cannot determine whether managers deliberately change their use of earnings-management methods. Our findings show only a conditional pattern consistent with that interpretation. They also show why dividends or low accrual manipulation alone do not prove high reporting quality.

Limitations and Future Research

Important limitations condition the scope of our findings. First, the firm and year fixed-effects design shows conditional associations within companies over time but does

not establish managerial intent, decision sequence, or a causal effect of dividend policy. Reverse causality remains possible because firms may choose or maintain dividends in response to operating and reporting conditions. Omitted time-varying firm-level shocks may also be associated with dividend yield, accrual-based earnings management, and abnormal operating cash flow at the same time.

Second, measurement error remains possible. Dividend yield contains market value in its denominator and may rise when equity value falls, even if the cash dividend does not change. The accrual and real-activity proxies are residual-based measures that may capture legitimate responses to changing business conditions as well as reporting discretion. These features limit any interpretation based on deliberate managerial substitution.

Third, the two-stage sample attrition summarized in Appendix Table A1 may limit representativeness. Missing earnings-management inputs prevent a complete comparison of retained and excluded observations, and early-year governance coverage contributes to the second-stage loss. Selection bias cannot be ruled out, so the findings apply to the observed common sample.

Fourth, the main interaction appears for REM_CFO but not for abnormal production costs, abnormal SG&A expenses, or the aggregate REM index. The cash-settlement and within-year flexibility argument offers a financial rationale for this channel concentration, but the available proxies cannot test the timing, reversibility, or operating costs of the underlying decisions directly. The findings therefore cannot be extended to real earnings management as a whole.

Future research could examine tax or regulatory changes that alter payout incentives, use detailed information on sales terms, collections, working-capital decisions, production schedules, and discretionary budgets, or compare firms across institutional settings. Such designs could distinguish more clearly between deliberate changes in reporting channels and a shared response to business conditions and could test why the operating-cash-flow margin differs from other real-activity margins.

6. Conclusions

This study set out to answer three questions. First, is a company's dividend policy associated differently with accrual-based and real operating earnings-management measures? We distinguish between accounting estimates and operating decisions, not only the overall amount of earnings management. Second, does the relation between these two forms of earnings management differ with the burden that a dividend places on the company's internal resources? Third, do cash holdings, ownership concentration, or business-group affiliation condition that relation?

Our results answer each question. On the first, we find little consistent link between dividend yield and changes in accounting estimates, but we find a clear, negative link with unusual patterns in operating cash flow. On the second, we find that the connection between the two types of earnings management gets weaker as dividend yield rises. This result is specific to abnormal operating cash flow: the corresponding interactions for production, SG&A expenses, and the aggregate REM index are statistically insignificant. The channel concentration is consistent with the cash basis of dividends and the greater within-year flexibility of sales, collections, and working-capital decisions, but the analysis does not test that mechanism directly. The operating-profit-scaled payout-burden result provides the primary H3b evidence because it has no shared operating-cash-flow construction component with REM_CFO. The free-cash-flow- and operating-cash-flow-scaled results are corroborating evidence because both measures share that component with REM_CFO. On the third, cash holdings provide suggestive conditioning evidence for the cross-channel association. Ownership concentration has no reliable moderating role. The exploratory

chaebol analysis is statistically inconclusive because the 267 affiliated firm-years provide limited power, so we draw no conclusion about direction or absence of an effect.

These findings contribute a specific correction to how the dividend–reporting-quality relation is understood. A company's dividend is not associated evenly with the two channels that managers can use to shape reported earnings: accounting estimates and operating decisions. A company that shows little accrual manipulation may still show unusual patterns in operating decisions. Examining only one channel may therefore give an incomplete picture of reporting quality. Our findings also show that the strength of this cross-channel pattern varies with the burden that a dividend places on the company's own resources, not simply with how large the dividend appears to the market. This evidence shows conditional within-firm associations only; it does not show managerial intent, deliberate substitution, or a causal effect of dividend policy.

The findings may help investors, boards, auditors, and regulators assess dividend payments alongside reported earnings, operating cash flow, and liquidity. Operating-profit coverage, cash-flow support, cash reserves, and unusual operating-cash-flow patterns may provide complementary information when payouts are high.

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Appendix A. Supplementary Tables

Table A1. Distribution of firm-year observations by industry and period.

Industry	1996–2000	2001–05	2006–10	2011–15	2016–20	2021–24	N	%
Information Technology	435	435	435	435	435	348	2523	22.48
Pharmaceuticals & Healthcare	215	215	215	215	215	172	1247	11.11
Oil and Gas	20	20	20	20	20	16	116	1.03
Consumer Services & Telecommunications	35	35	35	35	35	28	203	1.81
Consumer Goods	390	390	390	390	390	312	2262	20.16
Raw Materials	775	775	775	775	775	620	4495	40.05
Community Utilities	65	65	65	65	65	52	377	3.36
Total	1935	1935	1935	1935	1935	1548	11,223	100.00

Notes: This table reports the distribution of firm-year observations after initial sample filtration. All industry classifications follow the standard KSIC or equivalent sectoral groupings used in recent corporate finance literature. The broad cross-industry coverage of Korean listed firms is institutionally important because it shows that the empirical setting captures payout, ownership, business-group, and operating-resource variation across the real sectors in which this paper examines the dividend–reporting association. Sample attrition occurs in two stages: 1632 observations lack the inputs required to estimate the earnings-management measures, reducing the sample to 9591; a further 752 observations lack the complete regression controls, yielding the 8839-observation common sample. Because the first-stage exclusions lack one or both earnings-management measures and the second-stage exclusions are concentrated in years with thinner governance coverage, a complete retained-versus-excluded comparison is unavailable, and selection cannot be ruled out.

Table A2. Korea Fair Trade Commission (KFTC)–based chaebol matches in the sample.

Chaebol Group	Matched Firm Names in Dataset
Samsung	Samsung Electronics; Samsung SDS
Hyundai Motor	Hyundai Motor; Kia
SK	SK Innovation; SK Hynix
LG	LG Electronics; LG Chem
POSCO	POSCO Holdings
Hanwha	Hanwha; Hanwha Aerospace; Hanwha Solutions
GS	GS Retail
KT	KT
Hanjin	Hanjin; Korean Air
CJ	CJ CheilJedang; CJ Logistics
Doosan	Doosan Enerbility
DL	DL
Lotte	Lotte Shopping; Lotte Chemical
Shinsegae	Shinsegae; E-Mart
Hyundai Dept. Store	Hyundai Department Store
Hyundai Mobis	Hyundai Mobis
LG Display	LG Display

Notes: Table A2 reports chaebol groups and matched firms that appear as KFTC-based affiliates during at least one sample year. CHAEBOL_KFTC is coded at the firm-year level using the applicable annual KFTC designation, so inclusion in this table does not imply continuous affiliation throughout the sample period. The regressions use the one-period lag, L1_CHAEBOL_KFTC. KFTC recognition describes large business groups subject to Korea's fair-market-order and competition-policy oversight, including policies directed at economic-power concentration and ownership-governance transparency.

Table A3. Acronyms and variable abbreviations.

Acronym or Abbreviation	Definition
AEM	Accrual-based earnings management
AEM_JONES	Absolute discretionary accruals estimated with the Jones model
AEM_KASZNIK	Absolute discretionary accruals estimated with the Kasznik model
AEM_KOTHARI	Absolute discretionary accruals estimated with the performance-adjusted Kothari model
AEM_MJONES	Absolute discretionary accruals estimated with the Modified Jones model
CHAEBOL_KFTC	Indicator for KFTC-based chaebol affiliation
CURRENT_RATIO	Current assets divided by current liabilities
DIV_PAYER	Indicator equal to one for firm-years with positive cash dividends
DIV_PAYOUT	Cash dividends divided by net income
DIVT	Total common and preferred dividends
DIV_YIELD	Cash dividends divided by market value
FCF	Free cash flow; operating cash flow minus capital expenditures, scaled by assets
HIGH_YIELD	Indicator for top-tercile positive dividend-yield observations
KFTC	Korea Fair Trade Commission
KOSPI	Korea Composite Stock Price Index
L1	Prefix denoting a one-period lag
LEV	Leverage; total liabilities divided by total assets
MTB	Market-to-book ratio
N	Number of observations
OWNC	Ownership concentration
P25; P75	25th and 75th percentiles, respectively
RCASH	Cash and cash equivalents divided by total assets
REM	Real earnings management
REM_CFO	Sign-adjusted abnormal operating cash flow
REM_INDEX	Aggregate index combining REM_CFO, REM_PROD, and REM_SGA
REM_PROD	Abnormal production costs
REM_SGA	Sign-adjusted abnormal selling, general, and administrative expenses
ROA	Return on assets; net income divided by total assets
SD	Standard deviation
SIZE	Natural logarithm of total assets
TANGIBILITY	Property, plant, and equipment divided by total assets

Note

[1] We estimate AEM_JONES and AEM_MJONES separately from Equations (2) and (3), respectively. Their descriptive statistics in Table 1 coincide at the reported four-decimal precision, but the pairwise correlation between the underlying series is $\rho = 0.978$. The measures are therefore highly related but not identical. In our fully controlled specifications, the dividend-yield interaction is -1.9566 for AEM_MJONES in column (5) of Table 5 and -1.9421 for AEM_JONES in column (1) of Table 10. These estimates also confirm that the measures enter our tests as separate constructs.

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