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Dividend Policy, Earnings Management and Corporate Governance: An Empirical Study of American Agribusiness Firms

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This research seeks to examine the interrelationship among dividend policy (DP), earnings management (EM), and corporate governance (CG). DP is assessed both as a possible facilitator of EM practices and as a governance mechanism capable of mitigating financial reporting distortions. Drawing on a sample of 222 agribusiness firms based in the United States over the 2011–2021 period, the study empirically investigates these dynamics. The findings indicate that fluctuations in dividends can elucidate varying impacts on EM, depending on the nature of CG frameworks in place. Generally, modest increases in dividends associated with earnings growth are prevalent. In contrast, firms often resort to dividend reductions to mask sharp earnings declines and to counteract adverse investor sentiment. Furthermore, discriminant analysis reveals that firms characterised by strong CG—evident through significant managerial ownership, the presence of independent board members, and well-established audit committees—engage less in EM. Conversely, agribusiness entities with weaker governance structures are more prone to manipulative earnings practices. The research underscores that board-level dividend decisions can serve as informative signals or, where necessary, act as substitutes for comprehensive governance systems, thereby constraining managerial opportunism. This study contributes to the existing literature by elucidating the specific function of DP in facilitating or constraining EM and by emphasising the importance of integrated CG frameworks in sustaining financial integrity within the agribusiness sector. These insights are particularly relevant for policymakers, investors, and regulators aiming to enhance market discipline and promote environmentally sustainable financial conduct in agriculture.

Keywords: Dividend Policy, Earnings Management, Corporate Governance.

Introduction

At present, the agribusiness sector constitutes a critical intersection of food security, economic development, and technological progress. In the United States, agricultural firms increasingly adopt corporate structures that introduce new managerial complexities. Contemporary agribusiness organisations must manage a diverse array of stakeholders, extending beyond conventional shareholders to include farmers, consumers, regulators, and environmental advocates (Sporleder & Goldsmith, 2001). Owing to their position at the center of the food value chain and potential influence on the rural economy, such companies are subject to active public scrutiny, and sound CG practices are demanded (Boehlje, 2003). Use of biotechnologies, precision agriculture, and data-based methods has further muddied the waters, and greater governance is demanded in order to maintain stakeholders' confidence and obtain sustainable developments (Sonka, 2014).

Unlike other sectors, agriculture presents distinct CG challenges, namely related to openness and compliance arrangements. Inasmuch as the business is public-facing, EM and DP choices have ramifications extending beyond financial health into affecting farmer confidence, regulator perceptions, and broader reputational integrity (Barry et al., 2012). These elements lend themselves ideally to examining the effectiveness of CG with heightened public and regulatory scrutiny. In various industries, extensive research has confirmed a significant relationship between CG and EM, typically framed within agency theory, which posits that asymmetric information and conflicting incentives may lead managers to pursue self-interested behaviour (Jensen, 1986). Effective governance structures have the effect of decreasing EM by enhancing supervision, intensified oversight by the board, and bringing managerial objectives into line with those of the shareholders (Klein, 2002). There have always existed empirical evidence revealing that firms with robust governance have low anomalies in earnings that suggest manipulation (Beasley, 1996; Dechow, Sloan, & Sweeney, 1995).

But the governance-EM nexus is complicated by the case of agriculture. A high proportion of agribusiness firms are family firms with concentrated control and industry-specialized operating conventions that alter conventional agency interrelationships (Mishra, Wilson, & Williams, 2009). Seasonal fluctuation, climatic sensitivity, and variability in prices create distinct incentives for EM that may evade conventional governance measures (Ifft, Kuethe, & Morehart, 2015). There is evidence that firms in the industry smooth earnings to provide more stable performance signals to stakeholders (Ge & Kim, 2014). DP imposes further complications for governance analysis, importantly with consideration for the sporadic income patterns that are typical for farming operations. Theory has rival explanations for dividend payout. The free cash flow hypothesis contends that dividends act as a control measure, limiting managerial misuse of surplus funds and compelling external financing that subjects' investments to greater market scrutiny (Das Mohapatra & Panda, 2022; Jensen, 1986). Conversely, signalling theory holds that

dividends convey information regarding a firm's prospects, prompting managers to maintain steady pay-outs irrespective of underlying financial performance (Miller & Rock, 1985). It is especially significant here, where indirect agents have no first-hand knowledge of manager choices and must contend with sectoral challenges and uncertainties (Barry et al., 2012). Its dual description of DP—as both disciplinary device and potential avenue for EM—creates theoretical questions that must be answered empirically.

Latest research into agricultural finance has triggered debates regarding the cross-section between EM and dividends in the agribusiness industry. Some agribusiness companies transparently disclose dividend information with the aim to impact stakeholders' perceptions, which may unknowingly drive earnings inflation for sustaining dividend continuity (Ahmad et al., 2023). Some believe that dividend payments at this point are largely connected with liquidity management strategies due to specific capital requirements (Featherstone, Roessler, & Barry, 2006). These differing perceptions advocate comprehensive studies regarding dividend practice among agribusiness governance. The triadic relationship among CG, DP, and EM constitutes a complex framework that transcends binary analyses. Governance mechanisms may influence EM directly—via monitoring and control—and indirectly through their effect on DP choices. Effective governance may lead to DP strategies reducing earnings manipulation possibilities (La Porta et al., 2000). Their need, however, to maintain stable dividends may lead firms to mask their poor performances with the assistance of EM tactics (Daniel, Denis, & Naveen, 2008).

At the firm level, studies that directly consider how DP mediates between CG–EM are scarce. If DP is the conduit by which CG impacts EM, comprehension of this intervening role is important for the formulation of effective governance structures fit for the sector (Jiraporn, Kim, & Kim, 2011). The mediation model asserts that CG quality affects DP decisions that affect EM, offering an indirect governance influence that extends beyond mere supervisory roles. Agricultural enterprises, with their organizational and structural idiosyncrasies, could obscure or distort theoretical linkages. High capital intensity, long investment horizons, and exposure to biological and environmental risks render the sector uniquely dependent on tailored financial strategies. These factors are likely decisive about both EM tendencies and dividend behavior (Barry et al., 2012). High concentration and high debt in the sector also redefine traditional firm behavior and agency arrangements (Boehlje & Doering III, 2000). Furthermore, pressures by public policy that are aimed at agricultural output create yet another dimension, influencing earnings disclosures and payout decisions.

Other than general financial regulations, agriculture faces sectoral regulations for food safety, environmental compliance, and agricultural policy. These additional regulations could have served to escalate exposure by EM and DP, again requiring effective CG by organizational entities to retain legitimacy with regulators and the public at large (Thompson & Hannah, 2008). Where financial regulation meets agricultural regulation, there are specific issues of compliance that impact daily operative decisions.

Despite the theoretical significance of this tripartite relationship, empirical work exploring the simultaneous influence of CG, DP, and EM within agribusiness is limited. Existing research tends to isolate individual relationships or examine them outside the integrated organisational context (Cornett, Marcus, & Tehranian, 2008).

The present study addresses this gap by investigating how EM and DP decisions influence critical outcomes in agribusiness, including the capacity for biotechnology investment, trust among farmer stakeholders, and fulfilment of regulatory transparency obligations. These outcomes extend beyond financial indicators to reflect broader stakeholder impact. The study also assesses whether the sector's public exposure and regulatory intensity affect the efficacy of CG mechanisms relative to other industries. By focusing on Fortune 1000 agribusiness firms—representative of mature organisations with advanced governance practices and heightened accountability—the research provides nuanced evidence on the interplay between CG, DP, and EM. The integrated analysis of direct and mediated relationships contributes meaningfully to both academic understanding and practical guidance for policy and governance design in agricultural enterprises.

Literature Review

Earnings Management in Agricultural Enterprises

The methods used to assess EM within agricultural enterprises have advanced significantly, evolving from elementary accrual-based indicators to more intricate multivariate models that reflect the unique attributes of the sector. Initial agricultural finance research overwhelmingly employed discretionary accruals from the Jones (1991) model that estimates non-discretionary accruals by regressing with revenue changes and fixed assets such as property, plant, and equipment (Jones, 1991). Its application for agriculture, however, has been plagued due to sectoral attributes that are inherent, such as seasonality of cash flow, valuation issues that are inherent with livestock, and income that varies with weather-dependent crops.

Dechow et al. (1995) indicated that the modified Jones model produced more precise discretionary accruals estimates than prior approaches. In the years since, this new approach has seen extensive use among agricultural studies, with varied outcomes. Peasnell, Pope, & Young (2000) contributed their part with an examination of how corporate boards' composition influences EM, with the finding that firms with greater external directors evidenced low discretionary accruals usage. Their findings, with multiple sectors such as agriculture included, reflect the possible role that governance mechanisms have in lowering EM. In answer to the failures of traditional models, more elaborate measures of EM suitable for agricultural firms have emerged. One significant contribution was by Elad (2004), who gave an exhaustive treatment of biological assets' accounting. The study identified considerable discrepancies in the application of fair value measurements, highlighting that such practices could be exploited for earnings manipulation. Elad's research revealed that firms experiencing substantial growth in biological assets also

reported heightened earnings volatility, indicating that the accounting treatment of biological assets presents distinctive EM opportunities absent in many other sectors.

Empirical results concerning the prevalence and intensity of EM in agriculture are still inconclusive. Huffman (1989), for instance, compared EM orientations between agricultural cooperatives and investor-owned firms and found that the latter tended to have low discretionary accruals. This finding was explained by the dual nature of the members of cooperatives, who are proprietors and customers at the same time, and have therefore established intrinsic governance structures that inhibit managerial discretion. More recent studies have focused on individual agricultural sub-industries and the EM challenges that are ingrained within each. Penno & Simon (1986) have given seminal remarks concerning sector-specificity of accounting practices, which formed an intellectual foundation for the theoretical approaches that have been utilized in agricultural EM studies (Utari et al., 2023). The sector's susceptibility to government subsidies and price intervention schemes introduces further complexity in evaluating earnings quality. Key & Roberts (2006) documented these challenges in their analysis of how agricultural policies influence financial reporting behaviours, underscoring that external support mechanisms can distort earnings representations.

Corporate Governance Mechanisms

Measurement of CG in agriculture has developed over time from structural elements to wider industry-specific dynamics. In the first studies, authors commonly used indicators such as CEO duality, board autonomy, and the presence of audit committees to quantify governance quality (Fama & Jensen, 1983). While such first measures served well, they could not do justice when attempting to reflect the complexities of governance practices that are found within agricultural settings, where structures of possession are often defined by family control, co-ops, and various stakeholders. The theoretical model proposed by Fama & Jensen (1983) concerning organisational types and governance structures applies specifically to agriculture since business enterprises that are involved with this sector are commonly defined by hybrid elements that are found between public offerings and individually managed partnerships. Their model that targets decision-making control and residual claims provides an answer for why governance structures that are employed by firms within the agricultural sector must be different from structures that are employed by firms that are involved elsewhere. Even with empirical research that has studied CG within agriculture, findings have differed due to the distinct nature of the sector. For instance, Baysinger & Butler (2019) observed that enhancing board independence contributed positively to firm performance. However, subsequent studies within the agricultural domain have identified more nuanced patterns. Drawing on Hermalin and Weisbach's (2001) research, agricultural scholars now posit that domain-specific expertise on boards may play a more critical role in influencing outcomes than independence alone.

There have even been studies recently that have looked at structures of governance that are tailor-made for the structural idiosyncrasies of agricultural enterprises. In his examination of governance for cooperatives, Cook (1995) found that member participation and majority voting procedures create unique challenges and governance advantages. His study showed that, if properly designed and managed, structures of governance for cooperatives or partnerships are similar in their potential for managerial opportunism control with corporate structures. The structure of ownership among agricultural firms has even captured increased scholarly attention. Mishra et al. (2009) analysed the prevalence and implications of family ownership within the sector, concluding that family-owned farms exhibited distinct investment behaviours and risk management strategies compared to firms with widely dispersed shareholding. These differences underscore the importance of contextualising governance models to accommodate the specific ownership and operational characteristics prevalent in agricultural businesses.

Dividend Policy in Agricultural Contexts: Theoretical Predictions vs. Empirical Reality

Inter-cash flow cycle fluctuations, typical capital structures, and stakeholders-based dividend expectation in agricultural enterprises are among the most critical factors that lead to why dividend policy analysis for such business is different from traditional corporate finance literature. Seasonal revenues that the business relies upon, enormous payments in physical assets like land and equipment, and exposure to volatile commodity markets make stable dividend policy design challenging. Miller and Modigliani's (1961) foundational theory on the irrelevance of dividend policy under perfect market conditions has been contested in agricultural contexts, where information asymmetries and agency-related issues are often intensified. Subsequent work by Miller & Rock (1985) suggested that in agriculture, dividend announcements may not perform the same signalling function observed in other sectors.

There have emerged new studies that have reconsidered Lintner's (1956) postulates originally concerning dividend practices within agricultural settings. Because of the cash flow variability and extensive capital intensity that are characteristic of farming firms, agricultural firms have often tended towards defensive dividend policy (Barry et al., 2012). Emerging trends among such studies are that there is high heterogeneity in dividend and earnings management behaviours that are firm-specific and sectoral. Skinner & Soltes (2011) cited that increased pressure concerning the maintenance of dividend payouts might inflame earnings inflation, with reference for agricultural firms that have oftentimes had to maintain dividend consistency given income variability. Structural form of agricultural organizations also influences dividend strategy. Royer (2014) investigated dividend and patronage refund practices in agricultural cooperatives, highlighting how their governance architecture leads to different decision-making approaches when compared to publicly traded corporations. His findings demonstrated that cooperative dividend behaviour is more sensitive to member relationships and participatory dynamics than to purely financial considerations. This reinforces the argument that dividend

policy in agriculture is not only a financial mechanism but also a relational and governance-oriented tool.

Sector-Specific Challenges: Seasonal Earnings, Subsidies, and Environmental Accountability

Working difficulty of agricultural firms has important bearings on quality of board-level decisions and earnings management practice. Considering the reality that agricultural revenues are seasonally generated, firm analysis and financial reporting have erratic schedules themselves, and the incorporation of government support makes assessing reliability of earnings even trickier. In many cases, conventional financial governance instruments prove wanting, which pressures regulators into incorporating environmental considerations into their regimes of oversight. The seasonality of agricultural operations leads to pronounced fluctuations in income reporting, making it difficult for analysts to differentiate between genuine performance variations and manipulative reporting practices. Pope & Wang (2005) highlighted the difficulty of distinguishing seasonal income changes from deliberate managerial manipulation. Their study emphasised the necessity of sector-specific accounting standards and tailored benchmarks when assessing earnings quality in agriculture.

State-funded financing mechanisms add another level of complexity for earnings manipulation analysis for agricultural enterprises. Key & Roberts (2006) demonstrated that identification and timing of inflows of subsidies exert considerable impact on recorded earnings. Their evidence indicated that agricultural companies have considerable discretion regarding how they recognize such subsidies, which could provide greater potential for earnings manipulation than other companies. Moreover, the addition of environmental governance requirements in agriculture introduces governance matters that lie beyond the competency of regular corporate oversight mechanisms. Thompson & Hannah (2008) examined how regulatory compliance in environmental matters reshapes board composition and governance priorities. Their research revealed that firms with robust environmental governance frameworks not only exhibit higher compliance but also demonstrate improved stakeholder engagement.

Intersections between environmental reporting obligations and financial reporting offer earnings manipulation prospects alongside new sets of regulatory challenges. Environmental reporting requirements are important for agribusiness enterprises, and their reporting tends often to be left at the hands of individual producers. The research by Lyon & Maxwell (2011) is particularly suitable for agribusiness firms whose environmental rules have brought greater vigilance and demand for disclosures. Their analysis underscores the governance burden that environmental obligations place on agricultural firms and highlights the potential for such mandates to influence both earnings management and reporting behaviour.

Integration of Governance, Dividends, and Earnings Management: Empirical Synthesis

Scholarship that examines interdependencies between governance structures, dividend payment behavior, and earnings management by agricultural organizations has discovered significant conceptual and empirical complexities that are only partially addressed by prevailing theories. The complex nature of such interdependencies, along with sectoral nuances of agricultural firms, has led numerous researchers to shy away from comprehensive financial investigations within this sector. Jiraporn et al. (2011) provided one of the few studies that systematically investigated the joint influence of dividend policies and earnings management across agriculture and comparable sectors. Their findings indicated that dividend-paying firms are generally less inclined to engage in earnings manipulation compared to non-dividend-paying counterparts. However, within agricultural enterprises, governance mechanisms tied to dividend policies appeared to exert less influence, potentially due to the distinct organisational and operational features of the sector.

La Porta et al.'s (2000) framework, which links investor protection levels to dividend pay-outs, has had partial applicability in agricultural contexts. While their conclusion—that firms in jurisdictions with stronger investor protection tend to distribute higher dividends—has been corroborated within parts of the agricultural sector, the widespread presence of cooperative and family ownership complicates its broader application. This variation has led to increased academic interest in the role of dividend policy as a potential explanatory factor in the governance–earnings management nexus. Farinha (2003) argued that dividend policies may act as substitutes for other monitoring mechanisms in corporate governance, a proposition particularly salient for agricultural firms, where conventional oversight structures may be less effective due to the sector's unique features.

Research Gaps

Despite increasing awareness with respect to governance, dividend policy, and earnings manipulation, considerable gaps are present throughout the literature that inhibit theoretical comprehension and practical application throughout agribusiness firms. Current research models inhibit the development of sound management models that are uniquely crafted for companies that are involved with the farming business. Methodological inadequacies are prevalent, where many studies are still utilizing traditional earnings manipulation proxies that are insufficient for capturing the distinct manipulation tactics that are utilized throughout the farming business. Although some scholars have proposed sector-specific models, there remains no consensus regarding the appropriate governance controls for detecting earnings management in agriculture. Furthermore, the temporal scope of much research is insufficient to encompass the full agricultural production cycles, thereby restricting insight into how governance changes influence farm operations over time. The literature predominantly addresses developed markets, resulting in a geographic bias that reduces the generalisability of findings and potentially overlooks institutional factors critical for effective governance in emerging agricultural economies.

Moreover, integrating environmental, social, and governance (ESG) dimensions into agricultural finance

research is new. Despite increasing supervisory and social pressures related to the environmental impact of agriculture, governance research overwhelmingly resorts to conventional measures of finance at the cost of sustainability viewpoints. Inasmuch, the mechanisms underlying found association between governance practices and dividend policy, and earnings management are unclear. While numerous studies document association between variables, few test absolute causality connections or describe the conduits between them. These circumstances underscore the necessity for longitudinal, integrative research that makes allowances for the distinctness of agricultural enterprise and the interplay between stakeholders. Future research must privilege appropriate measurement methods, employ wider scales of geographical locations, cover ESG dimensions, and strive to reveal forces that drive sound corporate governance among agribusiness firms.

Methodology

Sample

It utilises an exhaustive database that includes 222 firms that are headquartered outside the United States and listed among the elite Fortune 1000 listings between 2014 and 2021. Financial and insurance sectors have deliberately been excluded with the intention of maintaining focused analysis for the study. Corporate governance data, such as significant variables such as board composition and audit committee presence, have been carefully extracted from a specialised governance database. Additional financial data, that includes comprehensive financials and off-balance-sheet components such as DP, have also been extracted from the same exhaustive repository. Additionally, market-related variables were gathered from a range of reputable financial market databases to provide a comprehensive perspective on the firms analysed. To measure DA as an indicator of EM, the study employs the Modified Jones Model (1991). This model estimates non-discretionary accruals based on the premise that managerial discretion is constrained. The model is formally specified as follows:

$NDAt = \alpha_1(1/At-1) + \alpha_2 (\Delta REVt - \Delta RECt / At-1) + \alpha_3(PPEt / At-1)$

Where:

NDAt: Non-discretionary portion of accruals in period t.

At−1: Total assets at the conclusion of the prior period.

ΔREVt: Change in revenues Among periods t and t−1.

ΔRECt: Change in accounts receivable during the same period.

PPEt: Net value of property, plant, and equipment in period t.

The total accruals can then be expressed as:

$TAt-1 / At-2 = NDAt + \varepsilon t,$

Here, TAt denotes the total accruals, and εt is the error term that isolates the discretionary component of accruals.

Disclosure by biotech firms is important to the economics of agriculture given their dependence on public financing, regulative control, and their critical role in ensuring global food security. Best practices for transparent reporting are recommended for increasing ethical public fund utilization, ease in compliance with regulative requirements, and enhancing investor confidence—preconditions that are necessary for attracting private investment, according to the Food and Agriculture Organization (FAO). Furthermore, information asymmetry is rectified by transparency, increasing market efficiency and reducing the cost of capital. ESG disclosures further strengthen the link between transparency and financial performance by aligning biotechnological operations with broader sustainability objectives. Additionally, transparent entities, exemplified by Ukrainian agroholdings, benefit from improved access to international equity markets, underscoring transparency's function in reinforcing corporate governance and enhancing sectoral resilience.

EM Motivated by Dividend Policy

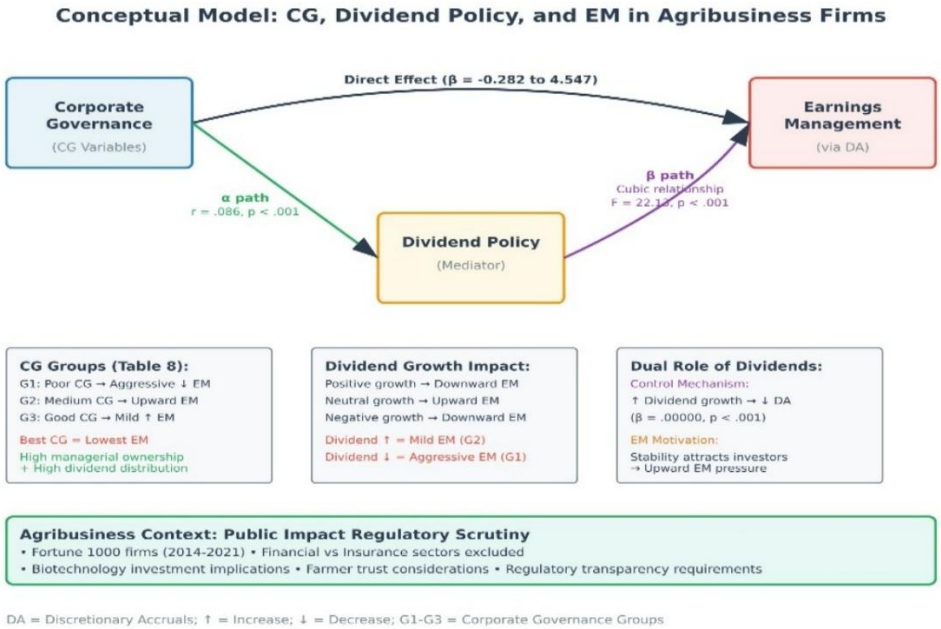

Figure 1: The Interplay Among the Variables.

DP has long been a central subject of academic investigation, as dividend decisions represent one of the most significant financial choices faced by firms. Nevertheless, numerous unresolved issues remain. This section seeks to examine the relationship between DP and EM—two interrelated phenomena, given that dividend distributions are based on reported earnings, which can be susceptible to accounting manipulation. Kasen et al.

Results

Testing the Impact of Dividend Pay-Outs on EM through DA

To examine the hypothesis that DP serves as a motivation for EM, we analysed the relationship between DP and DA—used as a proxy for EM—calculated employing the modified Jones model. The results of this analysis are presented in Table 1. Moreover. Table 1 presents statistically significant Fisher F-values, which confirm the presence of an interaction between DP and DA. The highest F-value of 22.13 indicates that this relationship follows a cubic pattern. To further explore this association, the Pearson correlation coefficient between the two variables was computed, with the results displayed in Table 2. The modest yet statistically significant positive correlation corroborates the hypothesis that DP is positively related to EM. Subsequently, the sample was segmented according to dividend growth rate to analyse the behaviour of DA, with the results presented in Table 3.

Table 1: Interplay Among Pay-Out and DA Independent Variable.

Interplay Type	F	Sig.
Discretionary Linearis	13.52	.000
Quadratic	21.55	.000
Cubic	22.13	.000

Table 2: Correlation Matrix Among DA and Dividend Pay-Out.

Correlation	DA	Dividend/Earnings
DA	1	.086
Significance	.000	.000
Dividend/Earnings	.086	1
Significance	.000	.000

Table 3: EM and Dividend Growth Rate.

Dividend Growth Rate	EM Strategy
Positive	Downward EM
Neutral	Upward EM
Negative	Downward EM

The data indicate that variations in dividend pay-outs are associated with downward earnings management. Specifically, when DP increases, managers tend to reduce reported earnings to offset this rise. Conversely, decreases in DP coincide with downward earnings management as a means to signal subpar performance rather than managerial inefficiency. Meanwhile, stability in dividend growth is linked to upward earnings management aimed at attracting investors. These outcomes correspond with Lintner's (1956) findings, which noted that consistent dividend policies appeal to investors and are frequently accompanied by earnings management to preserve (1996) explored whether firms engage in EM with the specific intent of influencing DP. Their empirical study, utilising a sample of non-financial firms, provides evidence supporting the presence of dividend-driven accounting adjustments. Consequently, DP should not be considered in isolation when analysing EM strategies; rather, these concepts appear to exert reciprocal influence. Figure 1 illustrates the interaction among these variables. favourable perceptions. To enhance the analysis, the subset exhibiting downward earnings management was further segmented into clusters based on discretionary accruals and dividend growth rate. A descriptive analysis of these clusters is presented in Tables 4 and 5.

Table 4: Descriptive Statistics for DA and Dividend Growth Rate.

Group	Mean DA	Mean Dividend Growth Rate
G1	-.078	-0.16
G2	-0.27961	0.19

The findings presented in Table 5 indicate that dividend reductions are linked to pronounced downward earnings management. Conversely, dividend increases provoke only modest earnings management, as their favourable market signal can attract investors and indirectly enhance the firm's capital through stock price appreciation. Consequently, managers tend to minimally decrease reported earnings to counterbalance the decline in internal financing, which may be offset by external funding sources. These observations corroborate the conclusions of Gordon & Shapiro (1956), who established a positive association between dividend increases and firm value. However, dividend cuts exert a dual adverse effect: they provoke negative market responses and undermine managerial reputation, resulting in long-term detriments that surpass any short-term benefits derived from earnings management.

Table 5: EM and Dividend Changes.

Group	EM Type	Dividend Trend
G1	Aggressive Downward	Dividend Decrease
G2	Mild Downward	Dividend Increase

Interplay Among the EM, DP, AND CG

This section examines the influence of robust CG, particularly by the board of directors and the audit committee, on EM and DP. Research in this domain initially emerged in the United States, where Levitt (1998), then Chairman of the Securities and Exchange Commission (SEC), famously asserted: "An active and effective board, responsible financial management, independent auditors, and vigilant regulators all share the responsibility of protecting investor interests. Effective CG of the financial reporting process is a critical tool for firms and auditors in fulfilling this responsibility." This statement underscores the significant relationship between effective CG mechanisms and firm quality. CG is defined as "a set of mechanisms that define the limits of managerial power and influence decision-making, in other words, mechanisms that govern executive behaviour and delimit their discretion." In response to escalating concerns regarding managerial opportunism, the New York Stock

Exchange (NYSE) and NASDAQ enhanced audit committee requirements to improve committee functionality and the quality of financial reporting. Consequently, the SEC, NYSE, NASDAQ, and AMEX have advocated for optimal CG frameworks aimed at mitigating EM. Empirical studies by Abbadi, Hijazi, & Al-Rahahleh (2016), Gardi, Aga, & Abdullah (2023), and Hasan, Aly, & Hussainey (2022) substantiate the association between robust CG practices and improved financial reporting quality.

DP as a Tool for Managing Agency Conflicts

The optimal capital structure aims to minimise agency costs, with DP serving as a mechanism to control managerial conduct. Dividend payments may compel firms to obtain external financing, thereby exposing them to market scrutiny. Under such circumstances, managers are required to demonstrate strong historical performance and credible investment prospects to avoid penalties from the market. Empirical evidence suggests that dividend pay-outs tend to increase with the number of directors on the board, indicating that firms with a separation between ownership and control distribute higher dividends. However, while DP contributes to the reduction of agency costs, it simultaneously incurs other expenses, including taxation and transaction costs associated with issuing new equity. Consequently, the dividend pay-out ratio reflects a trade-off between minimising agency costs and minimising the costs related to dividend distribution (Bian et al., 2023; Tayachi et al., 2023).

Empirical Results: DP AND CG

To examine the role of DP as a CG mechanism, a regression analysis was conducted utilising the free cash flow model (Guizani, 2018).

Pay-out = β_0 + β_1 Managerial Ownership + β_2 Ownership Dispersion + β_3 Free Cash Flow + β_4 Fixed Assets / Total Assets + ε

Where:

Pay-Out = Dividend / Earnings

Ownership Dispersion = Measured by majority shareholder ownership

Free Cash Flow = (Net income – Dividend + Depreciation) / Total assets

The findings presented in Table 6 yield several important insights. A positive association between managerial ownership and DP appears to be theoretically sound. When managers possess a substantial share of the firm's equity, they directly benefit from dividend distributions, rendering the decision to disburse dividends both rational and legitimate. Additionally, a positive relationship is evident between DP and the ratio of fixed assets to total assets. This outcome is consistent with expectations, as fixed assets typically exhibit a negative correlation with agency costs stemming from conflicts between shareholders and bondholders. Accordingly, shareholders are more likely to receive elevated dividend payments, while bondholders experience increased security due to the enhanced asset base. Moreover, the data suggest that DP serves as a substitute for alternative CG mechanisms, such as managerial equity ownership and debt. In the context of ownership concentration, the observed negative correlation with DP implies that heightened concentration mitigates agency costs, thereby reducing the necessity for dividend-based governance mechanisms. When dominant shareholders wield significant influence over corporate decisions, they may favour accessing private control benefits over distributing dividends, which would otherwise be shared with minority investors. Finally, the negative coefficient identified between free cash flow and DP underscores their antagonistic effects. Dividend payments limit the volume of free cash flow accessible to managers, which could otherwise be diverted for personal objectives. Consequently, managers may opt to curtail dividend distributions to retain discretionary control over free cash flow and allocate it towards self-serving initiatives.

Table 6: Regression Results Using the Free Cash Flow Model.

Variable	Coefficient	Prob.
Managerial Ownership	.067791* (1.310802)	.0000
Holding	-.068406* (-1.344864)	.0000
Free Cash Flow	-7.18E-06* (-2.583244)	.0000
Fixed Assets / Total Assets	.027427* (7.077448)	.0000

The Impact of DP On The EM-CG Interplay

DP plays a dual role, acting as both a potential driver of EM and a CG tool that promotes transparency. Its impact varies by context and stakeholder perspective—managers, investors, and market participants may interpret DP differently based on their interests. To clarify the effects of CG on EM, the sample was divided into three groups based on CG variables that negatively influence DA. The findings are summarised in Tables 7 and 8. Moreover, Tables 7 and 8 show that firms with the most effective CG have the lowest EM levels, while those with aggressive EM practices exhibit poor CG. The intermediate group acts as a control between these extremes. To clarify the relationship among DA, EM, and CG, a discriminant analysis was conducted to assess whether ownership structure, free cash flow, DA, debt, and fixed assets ratio distinguish the three groups. Results are summarised in Tables 9 and 10. Furthermore, the results in Tables 9 and 10 further confirm that CG variables significantly affect EM, revealing clear differences among groups based on CG quality, ownership structure, and DP. The analysis of the structure matrix and the functions at the groups' barycentre's effectively positions both the groups and discrimination factors along two axes. This evaluation supports the conclusions presented in Table 11, highlighting key insights from the analysis.

Table 7: Descriptive Statistics of DA and CG Variables for the Three Groups.

Statistic (%)	G1	G2	G3
DA	-0.971	0.87582	.03248
Duality	0.1	0.16	0.73
Charter	0.1	0.3	0.58
Big 6	0.13	.02	0.87
Expertise	0.26	0.3	0.34
Managerial Ownership	0.23	0.26	0.5
% External in the Board	.09	0.426	0.5
Audit Committee Size	0.3	0.1	0.5

Table 8: EM and CG Characteristics of the Three Groups.

Groups	EM	CG
G1	Aggressive Downward Management	Poor CG Practices
G2	Upward Management	Control Portfolio
G3	Mild Upward Management	Good CG Practices

Table 9: Structure Matrix.

	Function 1	Function 2
Managerial Ownership	0.749*	-0.352
Holding	0.697*	-0.349
Dividend Growth Rate	0.121*	0.112
Debt Ratio	-.070	0.452*
Fixed Assets / Total Assets	.019	0.487*
Free Cash Flow	-.044	-0.324*

Table 10: Functions at Group Centroids.

Cluster Number of Case	Function 1.	Function 2
1	-0.282	0.378
2	-0.591	-0.280
3	4.547	-0.102

Table 11: Positioning on the Axes and Characteristics of the Groups.

Groups	Propriety	Managerial	Holding	Free-Cash-Flow
G1	-	-	-	
G2	-	High	-	
G3	High	High	-	
Groups	**Medium**	**Holding**	**Free-Cash-Flow**	
G1	-	-	-	
G2	-	High	-	
G3	High	High	-	

The group with the strongest CG structure and lowest EM is marked by high managerial ownership, concentrated ownership, and high dividend pay-out. The negative relationship between managerial ownership and EM holds when the manager does not fully own the firm; otherwise, distributing dividends would benefit the manager directly. Ownership concentration reduces EM by lowering agency costs, as dispersed ownership tends to increase them. Finally, dividend pay-outs negatively impact EM, indicating that their role as a control mechanism—by limiting free cash flow—outweighs any incentive effect on EM. The model is as follows:

$$DAi,t = \alpha 1\ managerial\ ownership + \alpha 2\ holding + \alpha 3\ duality + \alpha 4\ seniority + \alpha 5\ charter + \alpha 6\ Big6 + \alpha 7\ \%\ external\ in\ board\ of\ directors + \alpha 8\ \%\ external\ in\ audit\ committee + \alpha 9\ log\ of\ board\ size + \alpha 10\ log\ of\ audit\ committee\ size + \alpha 11\ log\ of\ number\ of\ board\ meetings + \alpha 12\ log\ of\ number\ of\ audit\ committee\ meetings + \alpha 13\ expertise + \alpha 14\ dividend\ growth\ rate + \varepsilon i,t$$

The regression results are presented in Table 12. A negative and significant coefficient indicates an inverse relationship between dividend growth rate and DA, showing that higher DP correspond to lower DA, which supports DP's role as a CG mechanism. The first group, with weak CG and high EM, has a high debt ratio and a high fixed asset ratio to total assets. To manage liquidity needs and avoid conflicts with bondholders over fixed assets, managers often incur high debt secured by firm assets. These investments can be manipulated to benefit managers personally, such as through stock purchases. The second group, acting as a control portfolio, has relatively high free cash flow, which, if not reinvested in profitable projects, could be used for managers' own benefit.

Table 12: Regression Results of DA Based on CG Variables and Dividend Growth Rate.

Variable	Coefficient	Prob.
Duality	.00000	.000
Seniority	.06123	.000
Charter	.00000	.001
Big6	.00000	.050
Expertise	.00000	.086
Managerial Ownership	.00000	.008
% External Members in the Board of Directors	.00000	0.172
% External Members in the Audit Committee	.00000	.023
Log of Board Size	.00000	.019
Log of Audit Committee Size	.00000	.069
Log of Number of Board Meetings	.00000	.045
Log of Number of Audit Committee Meetings	.00000	.000
Holding	-.00090	.001
Dividend Growth Rate	.00000	.000

Conclusion

This study offers detailed insights into the interaction between DP, EM, and CG within US agribusiness firms. Using statistical analysis of 222 firms from 2014 to 2021, it demonstrates that DP influences EM, either encouraging or restricting it depending on governance quality. Results reveal a strong positive link between DP and EM, mainly through discretionary accruals. Typically, earnings slightly decline when dividends increase, while larger earnings management occurs when dividends fall. Stable dividend growth reduces EM efforts and sustains investor confidence. This suggests managers adjust dividends strategically to influence market perceptions and protect earnings amid changing financial conditions. The findings also show that governance quality significantly affects the nature and extent of EM. Firms with strong governance—characterised by active audit committees, high managerial ownership, and more independent board members—tend to avoid earnings manipulation. Conversely, weak governance correlates with aggressive EM practices. Discriminant analysis highlights which governance features deter or permit EM. DP in agribusiness can complement or substitute traditional governance mechanisms by limiting managers' free cash flow, integrating internal and external financing decisions,

and improving governance effectiveness. DP rises with managerial ownership and fixed assets but falls with concentrated ownership and high free cash flow, confirming its role in managing agency conflicts. The study advises policymakers, investors, and regulators to design dividend and governance frameworks addressing sector-specific challenges such as seasonal earnings, regulatory constraints, and limited capital. Combining strong CG with dividend strategies could enhance profitability, investor trust, and sector resilience. The research further suggests expanding studies across regions and integrating ESG factors to better understand their interaction with financial practices in agribusiness and beyond.

References

Abbadi, S. S., Hijazi, Q. F., & Al-Rahahleh, A. S. (2016). Corporate Governance Quality and Earnings Management: Evidence from Jordan. *Australasian Accounting, Business and Finance Journal, 10*(2), 54-75. doi: https://doi.org/10.14453/aabfj.v10i2.4

Ahmad, G., Subhan, M., Hayat, F., & Al-Faryan, M. A. S. (2023). Unravelling the truth: A bibliometric analysis of earnings management practices. *Cogent Business & Management, 10*(1), 2194088. doi: https://doi.org/10.1080/23311975.2023.2194088

Barry, P. J., Ellinger, P. N., Hopkin, J., & Baker, C. B. (2012). Financial Management in Agriculture. In (Vol. 397). Upper Saddle River, NJ: Prentice Hall. Retrieved from https://library.wur.nl/WebQuery/titel/1963347

Baysinger, B. D., & Butler, H. N. (2019). Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composition. In R. I. Tricker (Ed.), *Corporate Governance* (pp. 215-238). Gower. Retrieved from https://www.taylorfrancis.com/chapters/edit/10.4324/9781315191157-13

Beasley, M. S. (1996). An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud. *The Accounting Review, 71*(4), 443-465. Retrieved from https://www.jstor.org/stable/248566

Bian, H., Kuo, J.-M., Pan, H., & Zhang, Z. (2023). The role of managerial ownership in dividend tunneling: Evidence from China. *Corporate Governance: An International Review, 31*(2), 307-333. doi: https://doi.org/10.1111/corg.12478

Boehlje, M. (2003). *Strategy Development in a Turbulent Business Climate: Concepts and Methods* (Staff Paper # 03-06). Department of Agricultural Economics, Purdue University. doi: https://doi.org/10.22004/ag.econ.28632

Boehlje, M., & Doering III, O. C. (2000). Farm Policy in an Industrialized Agriculture. *Journal of Agribusiness, 18*(1), 53-60. doi: https://doi.org/10.22004/ag.econ.14708

Cook, M. L. (1995). The Future of U.S. Agricultural Cooperatives: A Neo-Institutional Approach. *American Journal of Agricultural Economics, 77*(5), 1153-1159. doi: https://doi.org/10.2307/1243338

Cornett, M. M., Marcus, A. J., & Tehranian, H. (2008). Corporate governance and pay-for-performance: The impact of earnings management. *Journal of Financial Economics, 87*(2), 357-373. doi: https://doi.org/10.1016/j.jfineco.2007.03.003

Daniel, N. D., Denis, D. J., & Naveen, L. (2008). Do firms manage earnings to meet dividend thresholds? *Journal of Accounting and Economics, 45*(1), 2-26. doi: https://doi.org/10.1016/j.jacceco.2007.11.002

Das Mohapatra, D., & Panda, P. (2022). Impact of corporate governance on dividend policy: A systematic literature review of last two decades. *Cogent Business & Management, 9*(1), 2114308. doi: https://doi.org/10.1080/23311975.2022.2114308

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting Earnings Management. *The Accounting Review, 70*(2), 193-225. Retrieved from https://www.jstor.org/stable/248303

Elad, C. (2004). Fair value accounting in the agricultural sector: some implications for international accounting harmonization. *European Accounting Review, 13*(4), 621-641. doi: https://doi.org/10.1080/0963818042000216839

Fama, E. F., & Jensen, M. C. (1983). Separation of Ownership and Control. *The Journal of Law and Economics, 26*(2), 301-325. doi: https://doi.org/10.1086/467037

Farinha, J. (2003). Dividend Policy, Corporate Governance and the Managerial Entrenchment Hypothesis: An Empirical Analysis. *Journal of Business Finance & Accounting, 30*(9-10), 1173-1209. doi: https://doi.org/10.1111/j.0306-686X.2003.05624.x

Featherstone, A. M., Roessler, L. M., & Barry, P. J. (2006). Determining the Probability of Default and Risk-Rating Class for Loans in the Seventh Farm Credit District Portfolio. *Applied Economic Perspectives and Policy, 28*(1), 4-23. doi: https://doi.org/10.1111/j.1467-9353.2006.00270.x

Gardi, B., Aga, M., & Abdullah, N. N. (2023). Corporate Governance and Financial Reporting Quality: The Mediation Role of IFRS. *Sustainability, 15*(13), 9869. doi: https://doi.org/10.3390/su15139869

Ge, W., & Kim, J.-B. (2014). Boards, takeover protection, and real earnings management. *Review of Quantitative Finance and Accounting, 43*(4), 651-682. doi: https://doi.org/10.1007/s11156-013-0388-2

Gordon, M. J., & Shapiro, E. (1956). Capital Equipment Analysis: The Required Rate of Profit. *Management Science, 3*(1), 102-110. doi: https://doi.org/10.1287/mnsc.3.1.102

Guizani, M. (2018). The mediating effect of dividend payout on the relationship between internal governance and free cash flow. *Corporate Governance: The International Journal of Business in Society, 18*(4), 748-770. doi: https://doi.org/10.1108/CG-01-2018-0011

Hasan, A., Aly, D., & Hussainey, K. (2022). Corporate governance and financial reporting quality: a comparative study. *Corporate Governance: The International Journal of Business in Society, 22*(6), 1308-1326. doi: https://doi.org/10.1108/CG-08-2021-0298

Hermalin, B., & Weisbach, M. S. (2001). *Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature* (Working Paper No. 8161). National Bureau of Economic Research. doi: https://doi.org/10.3386/w8161

Huffman, S. P. (1989). The Impact of the Degrees of Operating and Financial Leverage on the Systematic Risk of Common Stocks: Another Look. *Quarterly Journal of Business and Economics, 28*(1), 83-100. Retrieved from https://www.jstor.org/stable/40472950

Ifft, J. E., Kuethe, T., & Morehart, M. (2015). Does federal crop insurance lead to higher farm debt use? Evidence from the Agricultural Resource Management Survey (ARMS). *Agricultural Finance Review, 75*(3), 349-367. doi: https://doi.org/10.1108/AFR-06-2014-0017

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review, 76*(2), 323-329. Retrieved from https://www.jstor.org/stable/1818789

Jiraporn, P., Kim, J.-C., & Kim, Y. S. (2011). Dividend Payouts and Corporate Governance Quality: An Empirical Investigation. *Financial Review, 46*(2), 251-279. doi: https://doi.org/10.1111/j.1540-6288.2011.00299.x

Jones, J. J. (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research, 29*(2), 193-228. doi: https://doi.org/10.2307/2491047

Kasen, S., Cohen, P., Brook, J. S., & Hartmark, C. (1996). A multiple-risk interaction model: Effects of temperament and divorce on psychiatric disorders in children. *Journal of Abnormal Child Psychology, 24*(2), 121-150. doi: https://doi.org/10.1007/BF01441481

Key, N., & Roberts, M. J. (2006). Government Payments and Farm Business Survival. *American Journal of Agricultural Economics, 88*(2), 382-392. doi: https://doi.org/10.1111/j.1467-8276.2006.00865.x

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics, 33*(3), 375-400. doi: https://doi.org/10.1016/S0165-4101(02)00059-9

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency Problems and Dividend Policies around the World. *The Journal of Finance, 55*(1), 1-33. doi: https://doi.org/10.1111/0022-1082.00199

Levitt, A. (1998). The Importance of High Quality Accounting Standards. *Accounting Horizons, 12*(1), 79-82. Retrieved from https://www.proquest.com/openview/113ef6fb20852f7024ae491923c7e84c

Lintner, J. (1956). Distribution of Incomes of Corporations Among Dividends, Retained Earnings, and Taxes. *The American Economic Review, 46*(2), 97-113. Retrieved from https://www.jstor.org/stable/1910664

Lyon, T. P., & Maxwell, J. W. (2011). Greenwash: Corporate Environmental Disclosure under Threat of Audit. *Journal of Economics & Management Strategy, 20*(1), 3-41. doi: https://doi.org/10.1111/j.1530-9134.2010.00282.x

Miller, M. H., & Modigliani, F. (1961). Dividend Policy, Growth, and the Valuation of Shares. *The Journal of Business, 34*(4), 411-433. doi: https://doi.org/10.1086/294442

Miller, M. H., & Rock, K. (1985). Dividend Policy under Asymmetric Information. *The Journal of Finance, 40*(4), 1031-1051. doi: https://doi.org/10.1111/j.1540-6261.1985.tb02362.x

Mishra, A., Wilson, C., & Williams, R. (2009). Factors affecting financial performance of new and beginning farmers. *Agricultural Finance Review, 69*(2), 160-179. doi: https://doi.org/10.1108/00021460910978661

Peasnell, K. V., Pope, P. F., & Young, S. (2000). Detecting earnings management using cross-sectional abnormal accruals models. *Accounting and Business Research, 30*(4), 313-326. doi: https://doi.org/10.1080/00014788.2000.9728949

Penno, M., & Simon, D. T. (1986). Accounting Choices: Public Versus Private Firms. *Journal of Business Finance & Accounting, 13*(4), 561-569. doi: https://doi.org/10.1111/j.1468-5957.1986.tb00518.x

Pope, P. F., & Wang, P. (2005). Earnings Components, Accounting Bias and Equity Valuation. *Review of Accounting Studies, 10*(4), 387-407. doi: https://doi.org/10.1007/s11142-005-4207-4

Royer, J. S. (2014). The neoclassical theory of cooperatives: Part I. *Journal of Cooperatives, 28*, 1-19. doi: https://doi.org/10.22004/ag.econ.244008

Skinner, D. J., & Soltes, E. (2011). What do dividends tell us about earnings quality? *Review of Accounting Studies, 16*(1), 1-28. doi: https://doi.org/10.1007/s11142-009-9113-8

Sonka, S. (2014). Big Data and the Ag Sector: More than Lots of Numbers. *International Food and Agribusiness Management Review, 17*(1), 1-20. doi: https://doi.org/10.22004/ag.econ.163351

Sporleder, T. L., & Goldsmith, P. D. (2001). Alternative Firm Strategies for Signaling Quality in the Food System. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie, 49*(4), 591-604. doi: https://doi.org/10.1111/j.1744-7976.2001.tb00329.x

Tayachi, T., Hunjra, A. I., Jones, K., Mehmood, R., & Al-Faryan, M. A. S. (2023). How does ownership structure affect the financing and dividend decisions of firm? *Journal of Financial Reporting and Accounting, 21*(3), 729-746. doi: https://doi.org/10.1108/JFRA-09-2021-0291

Thompson, P. B., & Hannah, W. (2008). Food and Agricultural Biotechnology: A Summary and Analysis of Ethical Concerns. In U. Stahl, U. E. B. Donalies, & E. Nevoigt (Eds.), *Food Biotechnology* (pp. 229-264). Springer Berlin Heidelberg. doi: https://doi.org/10.1007/10_2008_100

Utari, C., Manalu, M. W., Lubis, N. R., & Muda, I. (2023). Approaches and critiques of Positive Accounting Theory (PAT) and Normative Accounting Theory (NAT): a literature review. *Brazilian Journal of Development, 9*(12), 31784-31799. doi: https://doi.org/10.34117/bjdv9n12-082