Economics and Business Review

Review

Volume 11 (4)   2025

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Paper based publication

Sentiment and dividend smoothing: Do firms alter dividends during periods of high market activity?

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Abstract

This study investigates whether investor sentiment shapes dividend policy among publicly listed firms in Bangladesh by testing the hypothesis that firms alter their dividend smoothing practices in response to market optimism. We utilise a balanced panel of 116 firms from 2010 to 2021, applying robust panel regression techniques, including random effects, panel-corrected standard errors, and instrumental variable estimation to address model imperfections and potential endogeneity. Our findings show that, on average, firms increase dividends during periods of heightened investor optimism. However, this effect is moderated by prior dividend levels, indicating a tendency toward dividend smoothing. Firms appear to balance market sentiment with the need to maintain consistent payout signals. The findings contribute to the behavioural finance literature by highlighting sentiment as a key determinant of dividend behaviour within the Bangladesh context, where market volatility and retail participation are pronounced.

Keywords

• investor sentiment
• dividend policy
• dividend smoothing
• behavioural finance
• emerging markets

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Introduction

Dividend policy continues to be central to corporate finance because payouts perform multiples roles such as allocating cash, signalling inflation rate formation to the market, and mitigating agency conflicts. Classical perspectives emphasise fundamentals such as profitability, investment opportunities and financing frictions, while behavioural approaches argue that investor psychology can materially distort corporate incentives and market signals. Foundational empirical studies demonstrate that investor sentiment affects financing and payout choices across countries (Baker & Wurgler, 2006; Brav et al., 2005). More recent evidence refines this insight through new sentiment measures and transnational tests that reveal heterogeneity in how firms respond to market mood (Byun et al., 2021; Kumar & Sinha, 2024). Literature reviews and methodological overviews provide a comprehensive synthesis of themes and trends in the sentiment literature (Kamath et al., 2022, 2024; Maurya et al., 2025). Scholarly discourse on behavioural financial implications for macro and monetary analysis also highlight the broader relevance of sentiment for financial policy and firm behaviour (Willett, 2024). This prompts our core question: Does investor sentiment reshape the dynamics of dividend payouts and, specifically, the practice of dividend smoothing?

Empirical findings on the sentiment–dividend link are mixed and appear to be context-dependent. Baker and Wurgler (2006) demonstrate how sentiment alters capital-market incentives, which can translate into changes in payout policy, while catering theories posit that firms sometimes alter payouts to meet investor demand (Baker & Wurgler, 2004). Other studies find that firms conserve cash in booms to exploit favourable market valuations or to finance acquisitions instead of raising payouts (Ferris et al., 2009; Hoberg & Prabhala, 2008). Recent contributions also show that alternative sentiment proxies, such as online search intensity and news-based indices, predict corporate actions and market reactions (Belhoula et al., 2024; Duc et al., 2024; Qureshi, 2025). Bibliometric and systematic reviews further document the rapid growth of studies using social media, search intensity and machine-driven sentiment measures (Nyakurukwa & Patnaik, 2023; Prasad et al., 2023). Taken together, this evidence points to a non-uniform effect of sentiment on

dividends that depends on investor composition, country institutions and the sentiment measure used (Santi & Zwinkels, 2023; Z. Wang, 2023).

A specific and under-tested question is whether dividend smoothing moderates sentiment's effect on payouts. The dividend smoothing literature, initiated by Lintner (1956) and reinforced by empirical studies (Brav et al., 2005; Leary & Michaely, 2011), documents managers' preference for gradual adjustments to preserve reputational credibility. Yet it is unclear whether smoothing serves to counteract sentiment-driven pressures or whether it relaxes under volatile sentiment when dividend signals lose informational value. Empirical work offers competing predictions: firms might cater and increase payouts, or they might withhold distributions to retain flexibility (Dong et al., 2005; Ferris et al., 2009). Studies on momentum, return predictability and the masking of fundamentals provide related evidence that dividend signals may be less informative in momentum-driven markets (Novy-Marx, 2012). Country-specific investigations into ownership structure and monitoring also suggest that shareholder concentration and state support can influence dividend choices under market stress (Kluzek & Schmidt-Jessa, 2022; Pieloch--Babiarz, 2021). Our paper empirically tests the moderating role of prior dividend commitments by interacting sentiment with lagged dividends, a direct test of whether smoothing attenuates sentiment-induced payout changes.

In markets like Bangladesh, retail investor participation dominates, and price movements often reflect sentiment rather than fundamentals. This characteristic elevates the need to explore whether investor sentiment affects firm-level decisions, including dividend payouts. While prior research has mostly focused on developed markets, the emerging market context presents a unique opportunity to examine the behavioural underpinnings of financial policy. Recent regional evidence and practitioner-led studies find evolving dividend practices and strong sentiment effects in South Asia and other emerging markets (Abor & Bokpin, 2010; Kumar & Sinha, 2024; Lubis et al., 2024). Systematic comparative research also shows that emerging economies display greater sensitivity to sentiment because of weaker institutional frameworks and limited institutional investor oversight (Aivazian et al., 2003; Mampouya, 2024). Together, these studies underscore why Bangladesh merits focused analysis.

The Dhaka Stock Exchange (DSE) is a highly informative setting to examine these mechanisms. The DSE features a pronounced retail investor presence, episodic sentiment-driven swings, and a regulatory framework that has historically lagged major developed markets; all these factors amplify behavioural channels and make managerial responses to sentiment more salient. Regional and comparative evidence suggests that emerging markets display stronger sentiment effects on firm behaviour because of weaker investor protections and lower institutional ownership (Abor & Bokpin, 2010; Aivazian et al., 2003; Kumar & Sinha, 2024; Lubis et al., 2024). Recent regional studies and practitioner reports also document evolving dividend practices in South Asia and

similar markets, reinforcing the need for evidence from Bangladesh (Kumar & Sinha, 2024; Lubis et al., 2024). These institutional features motivate our empirical focus on the DSE and on how smoothing operates when sentiment is elevated.

The empirical design uses a panel dataset of 116 publicly listed firms across 14 sectors spanning the period 2010 to 2021. We construct a balanced panel with 1,392 firm-year observations. The primary dependent variable is cash dividend payout, while investor sentiment is measured using the Trading Volume Ratio (TVR). The model also includes an interaction term between TVR and lagged dividend payments to capture the moderating role of dividend history. Control variables include key firm characteristics such as size, profitability, leverage, and age, alongside macroeconomic factors like GDP growth rate, inflation rate, unemployment rate, and real interest rates. This comprehensive specification helps isolate the unique role of sentiment while controlling for standard determinants of dividend policy. The design and variable choices are informed by recent methodological overviews and empirical studies on sentiment measurement and dividend modelling (Kamath et al., 2022; Maurya et al., 2025; Prasad et al., 2023).

To ensure methodological rigour, we begin with diagnostic tests that assess multicollinearity, heteroskedasticity, autocorrelation, and cross-sectional dependence. We estimate Random Effects models, as both are appropriate under these conditions (Baltagi, 2005). Following the recommendations made by Beck and Katz (1995) for dealing with panel data exhibiting both cross-sectional dependence and heteroskedasticity, we further validate our findings using the Panel-Corrected Standard Errors (PCSE) estimator. These empirical techniques are essential for controlling for latent firm-level heterogeneity and macroeconomic shocks, factors especially relevant in frontier markets like Bangladesh (Bissoondoyal-Bheenick et al., 2022; W. Wang et al., 2022).

Our findings indicate that investor sentiment exerts a significant influence over firms' dividend payout policy. Specifically, we find a positive and statistically significant relationship between Trading Volume Ratio and cash dividends, suggesting that during high-sentiment periods, firms tend to increase dividend payouts, at least on average. This behaviour aligns with the notion that optimistic market environments encourage firms to distribute their earnings. However, the inclusion of the interaction term between TVR and lagged dividends implies that this effect does not apply to firms that made no dividend payments in the previous period. In their case, it is even less probable that they will distribute their earnings during a period of market optimism. This duality reflects a nuanced strategy: while many firms respond to buoyant sentiment with increased payouts, some are even more inclined to remain conservative. These patterns echo previous findings on sentiment-driven corporate behaviour and its implications for volatility and firm policies (Berger, 2022; Gao et al., 2022; Huynh et al., 2021).

To reinforce the robustness of our conclusions, we estimate a 2SLS model using lagged trading volume ratio as an instrumental variable to account for potential endogeneity in the sentiment-dividend nexus. Diagnostic tests such as the Kleibergen-Paap LM statistic and Hansen's *J* test confirm the validity and robustness of our instrument. The 2SLS results reaffirm our earlier findings: investor sentiment exerts a positive effect on dividend payouts, but some firms moderate this effect through dividend smoothing practices. These findings enhance the causal interpretation of our model and reinforce the argument that even in sentiment-driven markets, firms employ conservative payout strategies to manage long-term investor expectations, mitigating the potential volatility induced by transitory market moods (Gaies et al., 2022; Goel & Dash, 2022).

This paper contributes to the dividend literature by situating payout policy within the broader framework of investor sentiment and financial decision-making in frontier markets. Our findings align with growing evidence that sentiment measures shape financial decisions, including dividends (Belhoula et al., 2024; Duc et al., 2024; Kamath et al., 2024; Maurya et al., 2025; Qureshi, 2025; Z. Wang, 2023; Willett, 2024); we extend this literature by demonstrating how payout policy in frontier markets functions as both a behavioural response and a governance tool. While earlier works highlight the importance of sentiment dynamics in driving stock returns and volatility (Bissoondoyal--Bheenick et al., 2022; Nyakurukwa & Patnaik, 2023; Prasad et al., 2023; Santi & Zwinkels, 2023; W. Wang et al., 2022), our evidence emphasises that dividends themselves can transmit and absorb sentiment shocks. Moreover, we show that in weaker institutional contexts, dividends act as instruments to mitigate agency conflicts and enhance credibility (Kumar & Sinha, 2024; La Porta et al., 2000; Lubis et al., 2024; Pieloch-Babiarz, 2021), complementing studies on how corporate payout behaviour adapts under extraordinary conditions, such as policy interventions and crises (Goel & Dash, 2022; Huynh et al., 2021; Kluzek & Schmidt-Jessa, 2022). By focusing on frontier economies, this study diversifies the geographical scope of dividend research, which remains dominated by advanced and large emerging markets (Bekaert & Harvey, 2003; Kumar & Sinha, 2024). Moreover, we bridge gaps identified in bibliometric surveys by showing that integrating behavioural finance perspectives into dividend policy reveals dynamics obscured in traditional models (Berger, 2022; Gaies et al., 2022; Gao et al., 2022; Kamath et al., 2022).

The remainder of the paper is organised to present the study's arguments and evidence in a clear and logical sequence. Section 1 reviews the existing literature on investor sentiment, dividend policy, and dividend smoothing, and uses these insights to develop the research hypotheses. Section 2 describes the data and methodology, outlining the construction of key variables and explaining the econometric approach used to estimate the interaction effects. Section 3 reports the empirical results, beginning with baseline models

and then examining how sentiment interacts with firms' dividend histories. Section 4 discusses these findings in relation to prior research, noting where our results align with or depart from earlier studies. Last section concludes by summarising the contributions of the paper and briefly noting the study's limitations and implications for future research.

1. Literature review and hypothesis

Investor sentiment is commonly understood as a non-fundamental component of asset pricing that reflects investors' collective beliefs, moods, and demand pressures rather than firms' cash-flow fundamentals. Recent systematic reviews and bibliometric overviews treat sentiment as a multi-dimensional construct measured by trading-based proxies, attention and search intensity, news- and social-media text indices, survey-based mood measures, or composite indices that combine several signals (Belhoula et al., 2024; Duc et al., 2024; Maurya et al., 2025; Nyakurukwa & Patnaik, 2023; Qureshi, 2025). Empirically, scholars use relative Trading Volume Ratios and turnover to capture short-term enthusiasm (a liquidity/attention channel); Google Trends or search intensity serve as attention proxies, and text-based sentiment extracted from news or social media captures information flow and affect. These approaches reflect different theoretical channels: attention-driven price pressure, noise trading and mispricing, and information-processing limits, each of which can shape corporate decisions differently (Baker & Wurgler, 2006; Santi & Zwinkels, 2023; Z. Wang, 2023).

A rapidly growing body of literature links investor sentiment to firm-level decisions beyond returns, including financing, investment, and payout choices. Recent frontier- and emerging-market studies show that sentiment measures predict dividend and payout behaviour (Kumar & Sinha, 2024; Lubis et al., 2024), while cross-country work documents strong heterogeneity in sentiment effects, depending on investor protection frameworks and institutional settings (Belhoula et al., 2024; Byun et al., 2021). Methodologically, researchers employ panel estimators with fixed effects, event-study frameworks, attention-based regressions using search intensity, and machine-text sentiment regressions; several recent papers also use instrumental variables and Panel-Corrected Standard Errors to address endogeneity and cross-sectional dependence (Maurya et al., 2025; W. Wang et al., 2022). Collectively, these studies indicate that sentiment often matters for corporate choices but that the direction, magnitude, and persistence of effects vary by market, investor composition, and measurement approach (Bissoondoyal-Bheenick et al., 2022; Gao et al., 2022; Huynh et al., 2021). This broader behavioural per-

spective connects directly with modern developments in dividend catering theory, which also seeks to explain how market sentiment shapes managers' payout decisions.

Dividend catering theory has evolved from the original catering intuition to more sophisticated empirical tests of when and how managers cater to investor demand. Recent multi-country tests find that catering incentives vary with investor sentiment, legal protections and market liquidity, and may be stronger when sentiment is low or when catering reduces mispricing (Byun et al., 2021; Ferris et al., 2009; Kluzek & Schmidt-Jessa, 2022). Empirical extensions incorporate determinants such as investor demand captured by search intensity, ownership concentration, institutional investor presence, and macroeconomic uncertainty (Belhoula et al., 2024; Pieloch-Babiarz, 2021; Qureshi, 2025). These studies show mixed results: some document that firms increase payouts to satisfy investor preference for dividends, while others find that firms conserve cash during booms to exploit favourable valuations rather than increasing payouts (Dong et al., 2005; Hoberg & Prabhala, 2008). The diverging evidence suggests that catering behaviour is conditional on governance, investor base, and financing opportunities, which necessitates testing both catering and conservation channels in a single specification.

The dividend smoothing literature emphasises that managers prefer stable payouts to signal firm quality and reduce investor uncertainty (Brav et al., 2005; Lintner, 1956). More recent work quantifies determinants of smoothing and conditions under which smoothing weakens or strengthens (Leary & Michaely, 2011; Michaely & Roberts, 2012). Studies linking sentiment to smoothing find two competing mechanisms. On one hand, heightened sentiment may reduce the informational value of dividends, weakening smoothing incentives when investors rely more on mood and momentum than on fundamental signals (Gao et al., 2022; Novy-Marx, 2012). On the other, managers operating in sentiment-rich environments may smooth more aggressively to reassure investors and preserve reputations, particularly when retail participation is high (Kumar & Sinha, 2024; Lubis et al., 2024). This tension motivates our explicit test of whether smoothing moderates the direct effect of sentiment on payouts.

Recent empirical work has diversified the analytical toolkit for studying sentiment and corporate policy. Scholars combine traditional panel estimators with robust corrections for cross-sectional dependence (PCSE, GLS), employ two-stage least squares using lagged or external instruments, and exploit high-frequency attention proxies such as Google Trends or Twitter-derived sentiment (Duc et al., 2024; Maurya et al., 2025; Qureshi, 2025). Bibliometric and systematic reviews summarise these methodological trends, noting the rise of machine-learning text sentiment, network-connectedness approaches, and cross-market spillover analyses (Kamath et al., 2024; Nyakurukwa & Patnaik, 2023; Prasad et al., 2023). This methodological plurality suggests that

robust inference requires triangulation across estimators and proxies, a point we adopt in our own empirical design.

Emerging-market studies emphasise the role of institutions and ownership structure in shaping payout responses to sentiment. Evidence from Asia and Africa indicates that weaker investor protections and higher retail participation amplify sentiment effects on corporate policies (Abor & Bokpin, 2010; Aivazian et al., 2003; Kumar & Sinha, 2024; Lubis et al., 2024). Country-specific studies using Google Search and social media proxies find short-lived but economically meaningful attention-driven price pressure in frontier markets such as Vietnam and other South-East Asian exchanges (Duc et al., 2024). State aid and pandemic-era interventions also altered dividend choices, illustrating how policy regimes interact with sentiment to shape payout outcomes (Kluzek & Schmidt-Jessa, 2022). These lines of evidence demonstrate that institutional context is central to interpreting sentiment–dividend linkages.

Despite many new studies, the literature still exhibits three key gaps that our paper addresses. Firstly, while catering and conservation channels are both proposed, few papers jointly estimate the direct sentiment effect and the moderating role of ex-post smoothing within one coherent framework, especially in frontier markets (Byun et al., 2021; Kumar & Sinha, 2024). Secondly, few studies triangulate across estimators that correct for cross-sectional dependence and apply instrumental variables to probe causality in panel settings with episodic sentiment shocks (Belhoula et al., 2024; Maurya et al., 2025). Thirdly, frontier markets such as Bangladesh remain understudied despite evidence that Google-Search-, trading-volume- and local news sentiment effects are strong in comparable markets (Duc et al., 2024; Qureshi, 2025). By testing whether prior dividend commitments attenuate sentiment's effect on payouts and by applying a suite of robust estimators, this paper fills these gaps and helps reconcile divergent empirical findings.

Motivated by the reviewed evidence, we adopt two precise hypotheses:

H 1: An increase in investor sentiment reduces contemporaneous cash dividend payouts, ceteris paribus.
H 2: The negative effect of sentiment on dividends is attenuated for firms with stronger prior dividend commitments.

2. Methodology

We investigate whether heightened investor sentiment influences firms' dividend declaration decisions. To address this question, we draw on a sample of 116 listed companies covering 14 distinct sectors of the Dhaka Stock

Exchange. We selected these companies based on a convenient sampling technique. For our study, we eliminate companies in the financial industry, adhering to market conventions that often differentiate them regarding dividend distribution and stability. This omission helps preserve consistency when evaluating broader industrial sectors, where dividend smoothing is generally more evident. We consider companies listed on the Dhaka Stock Exchange, since this is Bangladesh's primary exchange, which covers the majority of the publicly listed companies. Moreover, companies listed on the DSE are the most representative of the broader corporate landscape in Bangladesh. Our sample period covers the years 2010 to 2021 and is based on data availability and its relevance in understanding the dynamic of dividend policy under significant economic and market developments, including the post-global financial crisis and COVID pandemic. This strategy yields a balanced panel comprising a total of 1,392 firm-year observations. We collect company-specific and macroeconomic data from the annual reports of the respective companies and World Bank indicators, respectively. Outliers were addressed through winsorisation, where observations below the 1st percentile and above the 99th percentile were replaced with the corresponding percentile values. This approach mitigates the impact of extreme observations without excluding data.

2.1. Variables

We incorporate one dependent variable, one key independent variable, and one moderating variable, along with four firm-specific control variables and four macroeconomic control variables. Trading Volume Ratio (TVR) was selected as the proxy of investor sentiment due to its widespread use in the literature. This proxy also covers the individual investor sentiment. Several studies (Baker & Wurgler, 2007; Haritha & Rishad, 2020; Schmeling, 2009) found that TVR can serve as a reliable indicator of the sentiment, as increased trading volume often correlates with heightened investor optimism. Though alternative sentiment proxies such as Consumer Confidence Index, Volatility Index can be used, they may not capture the specific behaviour of the individual investors in emerging countries like Bangladesh. In our analysis, we include several control variables identified in the literature as significant determinants of dividend policy. These variables encompass firm-specific characteristics such as size, profitability, leverage, and age, as well as macroeconomic factors including GDP growth, inflation rate, unemployment rate, and real interest rates. The inclusion of these variables allows for a comprehensive examination of the factors influencing dividend smoothing practices among firms listed on the Dhaka Stock Exchange.

In Table 1 we provide detailed definitions, operationalisation and references of each variable included in the analysis:

Table 1. Description of variables

Role	Variable	Description	Measurement	References
Dependent variable	cash dividend	measures the firm's actual dividend paid;	cash dividend percentage disbursed by the company	
Independent variable	trading volume ratio	proxy for investor sentiment — trading volume ratio	dividing trading volume by number of shares outstanding	Baker & Wurgler (2006); Schmeling (2009)
Moderator / interaction term	trading volume ratio × lagged cash dividend	captures how sentiment affects the tendency to smooth or alter dividends		
Control variables	firm size	proxy of firm size as measured by the assets	natural logarithm of total assets	Bon & Hartoko (2024)
	profitability	the profit that company generates from their core operation	ratio of operating profit to total assets	Wahyuni & Peride (2021)
	leverage	the degree to which firm relies to debt capital	ratio of total debt to total assets	Ali et al. (2015)
	age	age of the firm since inception to date	natural logarithm of age of the firm since inception to date	Benjamin & Tenai (2018)
	GDP growth	annual GDP growth rate	percentage changes of GDP growth rate	Romus et al. (2020)
	inflation rate	inflation rate	annual inflation rate	Osman et al. (2024
	unemployment rate	unemployment rate	annual average unemployment rate	Mahirun et al. (2023)
	real interest rate	interest rate after accounting for inflation	interest rate minus inflation rate	Hasan et al. (2022)

Source: own work.

2.2. Model of the study

We specify the following empirical model to examine the impact of investor sentiment on firms' dividend declaration decisions. We delineate both of the following equations based on our two hypotheses.

$$CASH\ DIVIDEND_{i,t} = \beta_0 + \beta_1 TVR_{i,t} + \beta_2 FIRMSIZE_{i,t} + \beta_3 OPPROFIT\_TA_{i,t} +$$
$$+ \beta_4 DEBT\_ASSETS_{i,t} + \beta_5 LNAGE_{i,t} + \beta_6 GDP_{i,t} + \beta_7 INF_{i,t} + \beta_8 UNEMP_{i,t} +$$
$$+ \beta_9 REALINT_{i,t} + \varepsilon_{i,t} \tag{1}$$

$$CASH\ DIVIDEND_{i,t} = \beta_0 + \beta_1 TVR_{i,t} + \beta_2 CASH\ DIVIDEND_{i,t-1} +$$
$$+ \beta_3 TVR_{i,t} \times CASH\ DIVIDEND_{i,t-1} + \beta_4 FIRMSIZE_{i,t} + \beta_5 OPPROFIT\_TA_{i,t} +$$
$$+ \beta_6 DEBT\_ASSETS_{i,t} + \beta_7 LNAGE_{i,t} + \beta_8 GDP_{i,t} +$$
$$+ \beta_9 INF_{i,t} + \beta_{10} UNEMP_{i,t} + \beta_{11} REALINT_{i,t} + \varepsilon_{i,t} \tag{2}$$

In these equations, the subscripts i and t denote firm i in year t, respectively. All variable definitions and notations are provided in Table 1. The term ε captures the error component.

2.3. Diagnostic tests

The study uses a series of diagnostic tests to ensure the robustness of our panel data analysis and to determine the appropriate model specification. These tests are presented in the Appendix. We assess the presence of multicollinearity among the explanatory variables using the Variance Inflation Factor (VIF). The mean VIF value is 1.65, which falls below the commonly accepted threshold of 10. We test for heteroskedasticity using the Breusch-Pagan/Cook-Weisberg test. The test yields a Chi-square statistic of 169.14 with a p-value near 0.000, indicating the presence of heteroskedasticity. We employ the Wooldridge test for autocorrelation in panel data to examine the presence of serial correlation in the error terms. The test produces an F-statistic of 0.014 with a p-value of 0.9055. Thus, we find no evidence of autocorrelation. We apply the Pesaran test to examine the presence of cross-sectional dependence. The test returns a p-value close to 0.0000, suggesting that cross-sectional dependence is present in the dataset. To determine the appropriate estimation technique between Fixed Effects and Random Effects Models, we conduct the Hausman specification test. The test yields a Chi-square statistic of 5.69 with 9 degrees of freedom and a p-value of 0.7732, which justifies the choice of the Random Effects Model.

2.4. Model specification

To ensure the reliability of our regression estimates, we employ both the Random Effects (RE) Model and Panel Corrected Standard Errors (PCSE) approach. The choice of these models is guided by the results of diagnostic tests, which confirm the presence of cross-sectional dependence and heteroskedasticity in the dataset. We employ the PCSE model following the recommendations made by Beck and Katz (1995), who advocate for the use of Panel Corrected Standard Errors (PCSE) in the presence of heteroskedasticity and cross-sectional dependence.

3. Results

3.1. Descriptive statistics

Table 2 represents the descriptive statistics of the study, highlighting the mean, median, first quartile, third quartile and standard deviation of each

Table 2. Descriptive statistics

Variable	Mean	Median	1st quartile (Q1)	3rd quartile (Q3)	Standard deviation
Cash dividend	0.3986	0.1000	0.0000	0.2200	1.2186
Trading Volume Ratio	0.2682	0.0037	0.0012	0.0105	6.3866
Firm size	9.3770	9.3446	8.8393	9.8733	0.7811
Profitability	0.0656	0.0440	−0.0002	0.0934	2.2720
Leverage	1.9759	0.2317	0.0570	0.4357	29.3797
Age	27.2400	2.5200	19.0000	40.0900	0.2408
GDP growth	0.0634	0.0650	0.0605	0.0697	0.0108
Inflation rate	0.0661	0.0615	0.0560	0.0730	0.0119
Unemployment rate	0.0449	0.0444	0.0415	0.0470	0.0047

Note: This table presents the descriptive statistics for the variables used in the analysis. The statistics reported include the mean, median, first quartile (Q1), third quartile (Q3), and standard deviation. Cash dividend and Trading Volume Ratio represents firm-level payout and market activity, respectively. Firm size, profitability, leverage, and age are firm-specific characteristics. GDP growth rate, inflation rate, and unemployment rate capture macroeconomic conditions. The values reflect the distribution of observations across the full sample period. The quartile measures indicate the spread of the data around the central tendency, while the standard deviation captures variability within each variable.

Source: own calculation.

variable. The average cash dividend paid by the firms is around 39.86%, with a median of 10%. The standard deviation of the variable is very high, which indicates that many firms either pay no dividends or maintain low dividends, consistent with dividend-smoothing behaviour. The Trading Volume Ratio, serving as an indicator of investor sentiment, registers a mean of 0.2682 and a very high standard deviation of 6.3866, indicating irregular surges in market activity characteristic of sentiment-driven trading in emerging markets. The distribution of firm size is somewhat symmetrical around the mean. Profitability (mean 0.0656; SD 2.2720) and leverage (mean 1.9759; SD 29.3797) exhibit significant variability. The average firm age is 27 years, implying a relatively mature sample of listed companies. Macroeconomic variables such as GDP growth (6.34%), inflation (6.61%), and unemployment (4.49%) are stable with low variability, representing the broader macro environment during the period.

3.2. Regression results

Table 3 shows the results based on Random Effect Model (RE) and Panel Corrected Standard Error Model under hypothesis 1. The results show that the Trading Volume Ratio has a positive and significant effect on cash dividends in the PCSE model, which indicates that firms generally pay higher dividends when market activity is high. It contradicts our first hypothesis. Additionally, firm size consistently shows a strong positive effect, meaning larger firms pay more dividends. Profitability, leverage, and firm age also register positive and significant relationships in the PCSE model, suggesting that financially stable and mature firms distribute higher dividends. GDP growth shows a negative and significant effect, indicating that firms reduce dividends when economic conditions improve, possibly to retain earnings for investment. Inflation, unemployment, and real interest rates do not show significant effects, which means these macroeconomic factors do not strongly influence dividend decisions. Overall, the PCSE model provides better explanatory power, and the results confirm that both market sentiment and firm characteristics shape dividend policy.

Table 4 shows the results based on both models for hypothesis 2. We follow Brambor et al. (2006) and add an interaction term between the Trading Volume Ratio and lagged dividends. After including the interaction term, the parameter close to trading volume ratio become negative. This indicates that companies that paid no dividends in the previous period are even less likely to pay them when the Trading Volume Ratio increases in the current period. At the same time, the interaction term is positive and significant in the Random Effects Model and positive but weaker in the PCSE model. This suggests that the negative effect of sentiment on dividend payouts becomes less negative for firms with higher prior dividends. Therefore, when firms have historical

Table 3. Assessment of the impact of trading volume ratio on the cash dividend

	Random Effects Model		PCSE Model	
Trading Volume Ratio	0.0015 (0.0029)	0.0008 (0.0030)	0.0009*** (0.0003)	0.0010*** (0.0004)
Firm size		0.2233*** (0.0834)		0.2166*** (0.0714)
Profitability		0.0100 (0.0098)		0.0042** (0.0021)
Leverage		0.0004 (0.0009)		0.0007** (0.0004)
Age		0.5319* (0.3083)		1.0324*** (0.3077)
GDP growth		−2.5465 (1.8976)		−2.4613*** (0.6958)
Inflation rate		−2.2828 (2.4993)		−1.7499 (1.1771)
Unemployment rate		1.9339 (7.0097)		−2.8270 (5.2156)
Real interest rate		0.2181 (0.3676)		0.2208 (0.1356)
Intercept	0.3982 (0.0962)	−2.2420 (0.8936)	0.4070 (0.1083)	−2.7110 (0.5428)
R-Square (%)	0.8	17.11	5.6	22.11
Prob > chi2	0.6120	0.0000	0.0004	0.0000
Companies	116	116	116	116
Observations	1,392	1,392	1,392	1,392

Note: This table presents panel regression estimates assessing the influence of investor sentiment, proxied by the Trading Volume Ratio, on firms' cash dividend payments. Coefficients are reported with standard errors in parentheses; ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The Random Effects Model provides baseline estimates accounting for unobserved firm heterogeneity, while the PCSE specification corrects for heteroskedasticity and contemporaneous correlation across firms. Overall model fit improves noticeably under PCSE, and Chi-square statistics confirm strong joint significance of the explanatory variables.

Source: own calculation.

dividend commitments, they are less likely to reduce dividends even when market sentiment is high. This directly supports our hypothesis 2, as the results show that the adverse effect of investor sentiment on dividends is limited to companies with no dividends history and is attenuated by stronger prior dividend commitments.

For the control variables, firm size shows a weak positive effect, while profitability, leverage, and age show no consistent influence on dividends. GDP growth has a negative and significant effect, meaning firms reduce dividends when economic conditions improve. Inflation, unemployment, and real interest rates do not show significant effects. Overall, the models indi-

cate that sentiment may reduce dividends, but firms with stronger historical payout commitments moderate this response, aligning closely with the proposed hypothesis.

Table 4. Results for the interaction between Trading Volume Ratio and cash dividend

	Random Effects Model	PCSE Model
Trading Volume Ratio	−0.0094***	−0.0087*
	(0.0031)	(0.1121)
Cash dividend$_{t-1}$	0.9200***	0.9509***
	(0.0163)	(0.0553)
Trading Volume Ratio × Cash dividend$_{t-1}$	0.1021***	0.0945
	(0.0180)	(0.1065)
Firm size	0.0297*	0.0218
	(0.0220)	(0.0539)
Profitability	−0.0003	−0.0007
	(0.0079)	(0.0021)
Leverage	0.0000	0.0000
	(0.0006)	(0.0003)
Age	0.0340*	0.0074
	(0.0746)	(0.1551)
GDP growth	−4.1407*	−4.1592***
	(1.7705)	(0.9759)
Inflation rate	−2.6966	−2.6287
	(2.1872)	(1.4699)
Unemployment rate	−7.2179	−6.9015
	(6.3427)	(5.9369)
Real interest rate	0.2889	0.3472
	(0.6084)	(0.1410)
Intercept	0.4889	0.5735
	(0.93)	(0.5417)
R^2	78.03%	81.45%
Prob > chi2	0.0000	0.0000
Companies	116	116
Observations	1,392	1,392

Note: This table reports the results of Random Effects (RE) and Panel-Corrected Standard Errors (PCSE) regressions examining how investor sentiment influences firms' cash dividend payments. Investor sentiment is proxied by the Trading Volume Ratio. Coefficients are reported with standard errors in parentheses, and ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The PCSE Model demonstrates higher explanatory power, and Chi-square statistics confirm overall model significance.

Source: own calculation.

Following Brambor et al. (2006), we create Figure 1 that shows the marginal effect of the Trading Volume Ratio on cash dividends across the observed range of lagged cash dividends. The solid blue line denotes this marginal effect, which is consistently positive and increases steadily. The shaded area represents the 95% confidence interval. In the case of the Random Effects Model, the entire interval lies above zero for all positive values of the moderator, which means that the marginal effect of the trading volume ratio is statistically significant and positive across the full range. This is consistent with results presented in Table 3.
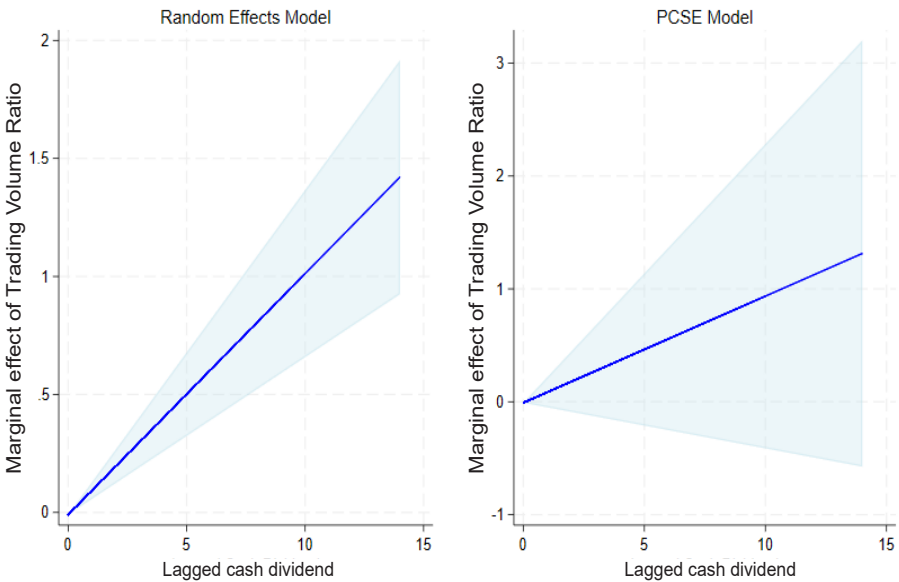
Figure 1. Marginal effect of Trading Volume Ratio

Note: The graphs use the random effects and PCSE models from Table 4. Lagged cash dividend ranges from 0 to 14 (although the 3rd quartile is equal to 0.2200). The confidence interval is 95% in both graphs.

Source: own work.

3.3. Endogeneity correction

To address potential endogeneity concerns related to investor sentiment in shaping dividend policy, we implement a two-stage least squares (2SLS) estimation strategy. Specifically, we employ Trading Volume Ratio using its one-period lag, Trading Volume Ratio$_{t-1}$, under the assumption that past sentiment influences current sentiment but is unlikely to be directly correlated with contemporaneous dividend shocks. This instrumental variable approach helps mitigate reverse causality and omitted variable bias that may arise in

the baseline regressions. The model retains the same set of firm-specific and macroeconomic control variables as specified in Equation (2).

Table 5 reports the diagnostic tests confirming the validity and strength of the chosen instrument. The Kleibergen-Paap LM statistic rejects the null of under identification, indicating that the instrument is relevant and meaningfully correlated with the endogenous regressor. The Cragg-Donald F-statistic exceeds the 10% Stock-Yogo critical value, suggesting that the instrument is not weak and that the estimates are unlikely to suffer from weak instrument bias. Additionally, the Hansen J test for overidentifying restrictions yields a p-value of 0.35, indicating that the instrument is valid and exogenous, as we fail to reject the null hypothesis of instrument orthogonality. Taken together, these results confirm that the lag of trading volume ratio is a statistically sound instrument for addressing potential endogeneity in the sentiment-dividend relationship.

Table 5. Instrument Validity Test

Test	Statistic	p-value / critical value	Interpretation
Under identification (Kleibergen-Paap LM)	15.732	0.0001	instrument is relevant
Weak Identification (Cragg-Donald F)	25.814	10% critical value = 16.38	strong instrument
Hansen J (Overidentification)	0.872	0.35	instruments are valid

Note: This table reports the diagnostic tests used to evaluate the validity of the instrumental variables employed in the regression analysis. The tests presented include the Kleibergen-Paap LM statistic for under identification, the Cragg-Donald F-statistic for weak identification, and the Hansen J test for overidentification. For each test, the corresponding test statistic and either the p-value or the relevant critical value is reported.

Source: own calculation.

Table 6 presents the findings from the Two-Stage Least Squares (2SLS) regression, indicating substantial connections among investor sentiment, dividend smoothing, and other firm-specific and macroeconomic variables. The Trading Volume Ratio demonstrates a negative and statistically significant impact on dividend payment behaviour, suggesting that firms with no prior dividends are inclined to reduce payments during times of increased market optimism. The interaction term between the Trading Volume Ratio and lagged cash dividend is both positive and significant, indicating that firms with high prior dividends are more inclined to increase dividends during periods of high sentiment. The lagged cash dividend variable has significant persistence, confirming the influence of previous payment on present dividend determinations.

Table 6. Results of 2SLS Regression

Variable	Coefficient	Robust standard error	z-value	p-value
Trading Volume Ratio	−0.0125	0.0050	−2.50	0.012
Cash dividend$_{t-1}$	0.9163	0.0881	10.40	0.000
Trading Volume Ratio × Cash dividend$_{t-1}$	0.1132	0.0400	2.83	0.005
Firm size	0.0308	0.0226	1.36	0.174
Profitability	−0.0002	0.0025	−0.08	0.933
Leverage	0.0000	0.0002	0.26	0.792
Age	0.0356	0.1199	0.30	0.767
GDP growth	−4.5650	2.6547	−1.72	0.086
Inflation rate	−3.9958	2.1119	−1.89	0.058
Unemployment rate	−9.9214	8.5527	−1.16	0.246
Real interest rate	0.4861	0.1952	2.49	0.013
Intercept	0.6971	0.4808	1.45	0.147
Centred R^2 (%)	78.05			
Prob > F	0.0000			
Companies	116			
Observations	1,392			

Note: This table reports the results of the Two-Stage Least Squares (2SLS) regression estimation. For each explanatory variable, the table presents the coefficient estimate, the corresponding robust standard error, the z-value, and the p-value. The interaction term between the Trading Volume Ratio and lagged cash dividend is included. Control variables consist of firm-specific characteristics and macroeconomic indicators, and an intercept term is also reported. Model fit is summarised using the centred R-squared, while the overall significance of the model is indicated by the Prob > F statistic.

Source: own calculation.

4. Discussion

Our empirical results show that elevated investor sentiment, proxied by the Trading Volume Ratio, is associated, on average, with an increase in contemporaneous cash dividends. However, the interaction between sentiment and lagged dividend indicates that this positive effect applies only to firms with a history of a previous payout. Conversely, firms that did not pay dividends in a preceding period exhibit even lower propensity to pay dividends during

periods of elevated investor sentiment. These patterns resonate with recent empirical work in emerging and frontier markets that reports a conservation or reallocation motive during sentiment booms rather than unconditional catering. For example, Kumar and Sinha (2024) and Lubis et al. (2024) document that firms in India and comparable South Asian markets often conserve cash or reallocate funds when market optimism is high, rather than increasing immediate payouts. Our finding therefore aligns with the conservation channel these authors emphasise, and it expands their scope by showing that smoothing weakens the immediate impact of sentiment on payouts.

At the same time, our results reconcile seemingly divergent findings in the literature. Several papers argue that managers cater to investor demand and increase dividends when sentiment is favourable (Baker & Wurgler, 2004; Ferris et al., 2009), while others document that firms exploit market booms by issuing equity or retaining cash for investment (Gao et al., 2022; Hoberg & Prabhala, 2008). By explicitly modelling the interaction between sentiment and prior dividend levels, we show both patterns can coexist. Managers increase payouts on average during sentiment spikes, yet firms without a payout reputation do not change their behaviour during the period of heightened sentiment. This reconciliatory view helps explain why cross-study comparisons sometimes produce conflicting conclusions: differences in investor composition, governance, and the prevalence of firms with established payout reputations can tip the observed net effect toward catering or conserving.

Methodologically, our use of panel estimators robust to cross-sectional dependence (GLS, PCSE) and the 2SLS check with lagged-TVR instruments aligns with the best practice emerging in the recent sentiment literature (Belhoula et al., 2024; Maurya et al., 2025). Many prior studies rely on single-estimator approaches or do not fully account for cross-country common shocks; by triangulating estimators, we reduce the chance that our results are driven by estimator choice or common-factor omitted variables. This methodological robustness is especially important in frontier markets, where episodic shocks and connectedness can bias naive panel estimates (Bissoondoyal-Bheenick et al., 2022; Z. Wang et al., 2022).

Institutional context matters for interpreting our findings. The Dhaka Stock Exchange, with high retail participation and weaker institutional monitoring relative to developed exchanges, is predisposed to stronger short-term sentiment effects (Abor & Bokpin, 2010; Aivazian et al., 2003). Our evidence complements country-specific work showing attention-driven price pressure in frontier exchanges (Duc et al., 2024; Qureshi, 2025), and pandemic-era and policy-distortion studies that altered payout policies in other emerging contexts (Kluzek & Schmidt-Jessa, 2022). Thus, the signs of dividend smoothing observed in our sample should be read alongside these institutional features: smoothing appears to be a deliberate stabilising strategy adopted by managers facing volatile retail-driven sentiment and limited institutional disciplining.

Beyond empirical alignment, our study contributes conceptually by showing how smoothing functions as a moderating mechanism rather than a rival explanation to catering. While catering theory suggests firms may increase payouts to satisfy investor tastes, our results show that smoothing can dampen such responses when managers prioritise long-term reputational capital and financial discipline. This complements recent theoretical and empirical contributions that emphasise the conditional nature of catering incentives, along with the role of governance and market structure in determining payout responses (Byun et al., 2021; Lubis et al., 2024; Pieloch-Babiarz, 2021).

Finally, our findings have observable implications for market participants. Investors interpreting dividend announcements should incorporate prevailing sentiment measures and firms' payout histories into their valuation models, because a dividend cut during a sentiment spike may reflect either a prudent smoothing response or a signal of reallocation that implies different valuation adjustments. Regulators could likewise use disclosure requirements to reduce noise trading and to highlight management's explanations of payout changes during volatile sentiment episodes. These practical implications echo calls in recent studies for improved transparency and investor education in sentiment-prone markets (Maurya et al., 2025; Willett, 2024).

Conclusions

We examine whether investor sentiment shapes corporate dividend policy in a frontier-market setting and whether dividend smoothing moderates that relationship. Using a panel of 116 firms listed on the Dhaka Stock Exchange from 2010 to 2021, we proxy sentiment with the Trading Volume Ratio and estimate Random Effects, Panel-Corrected Standard Errors, and two-stage least squares to address cross-sectional dependence and endogeneity. We test two hypotheses within this framework: firstly, that higher investor sentiment reduces, on average, contemporaneous cash dividends; and secondly, that this negative effect is attenuated for firms with stronger prior dividend commitments. However, empirically, we only find support for the second one.

Our results contribute to the literature in three ways. Firstly, they extend behavioural finance evidence to a frontier market by documenting that sentiment materially affects payout choices where retail participation and episodic volatility are large. Secondly, they refine the catering versus conservation debate by showing that the average response to sentiment is one of catering. However, this does not apply to firms with no payout reputation. Thirdly, they strengthen empirical practice in this literature by triangulating estimators that

correct for panel data imperfections and by applying an instrumental-variable check to bolster causal interpretation.

Our findings are of practical relevance for investors, regulators, and policymakers. Understanding how sentiment shapes corporate decisions can help institutional investors refine their valuation models, particularly in contexts where fundamental analysis is often overshadowed by sentiment-driven trading (Kluzek & Schmidt-Jessa, 2022; Pieloch-Babiarz, 2021). Regulators can benefit by designing disclosure standards that address informational asymmetries and limit the impact of sentiment-driven trading. Finally, for policymakers, the observed evidence of conservatism despite heightened sentiment speaks to the strategic rationality of firms operating in volatile environments; rather than overreacting to market optimism, some firms appear to signal long-term stability, thereby preserving reputational capital and investor trust.

We acknowledge several limitations. Firstly, while the Trading Volume Ratio captures an attention and liquidity dimension, it does not encompass all dimensions of sentiment; complementary proxies such as Google Trends, news-based text indices, or survey measures may reveal additional channels. Secondly, the lagged-Trading Volume Ratio instrument improves causal inferences but cannot eliminate all dynamic endogeneity or contemporaneous common shocks. Thirdly, as our sample is limited to the Dhaka Stock Exchange, multi-country validation is required to establish external generality. Fourthly, richer shareholder- and board-level governance data would better explain heterogeneous firm responses. These caveats frame the opportunities for future research.

In sum, dividend policy in frontier markets reflects a strategic interplay between market mood and managerial commitment to conservatism. Firms do not simply conform to sentiment-driven pressures, they balance short-term conservation with long-term reputational concerns. We invite future studies to test these mechanisms using alternative sentiment proxies, multi-country samples, and natural experiments to further clarify how behavioural forces interact with corporate payout policy.

Appendix

Table A.1. Variance Inflation Factor (VIF) test

Variable	VIF	1/VIF
Unemployment rate	3.11	0.3219
Inflation rate	3.06	0.3264
Trading volume ratio	1.47	0.6797
GDP growth	1.44	0.6953
Leverage	1.35	0.7409
Profitability	1.29	0.7747
Real interest rate	1.16	0.8605
Age	1.06	0.9402
Firm size	1.05	0.9505
Mean VIF	1.65	

Note: The VIF values presented in this table are based on a simple OLS (pooled) regression model for Equation (1).

Source: own calculation.

Table A.2. Breusch–Pagan / Cook–Weisberg test for heteroskedasticity

Model	Chi2	Prob > chi2	Presence of heteroscedasticity
1	169.14	0.0000	yes

Note: The value of Breusch–Pagan / Cook–Weisberg test for heteroskedasticity presented in this table are based on a simple OLS (pooled) regression model for Equation (1).

Source: own calculation.

Table A.3. Wooldridge test for autocorrelation

Model	F value	Prob > F	Presence of autocorrelation
1	0.014	0.9055	no

Note: The value of Wooldridge test for autocorrelation presented in this table are based on a simple OLS (pooled) regression model for Equation (1).

Source: own calculation.

Table A.4. Pesaran test of cross-sectional independence

Model	Pesaran value	Probability value	Presence of cross-sectional dependence
1	94.032	0.0000	yes

Note: The value for the Pesaran test of cross-sectional Independence presented in this table are based on a simple OLS (pooled) regression model for Equation (1).

Source: own calculation.

Table A.5. Hausman test

Variable	Random effects (B)	Fixed effects (b)	(b – B)	Standard error
Trading Volume Ratio	−0.0279	−0.0299	−0.0021	0.0010
Trading Volume Ratio × Cash dividend$_{t-1}$	0.2831	0.3021	0.0189	0.0056
Firm size	0.1419	0.2414	0.0994	.
Profitability	0.0071	0.0069	−0.0002	0.0026
Leverage	0.0002	0.0007	0.0005	.
Age	0.0095	0.7448	0.7352	.
GDP growth	−3.7378	−4.5893	−0.8516	0.4763
Inflation rate	−5.5911	−3.9832	1.6079	.
Unemployment rate	−2.3957	−10.3801	−7.9844	.
Real interest rate	0.2833	0.2889	0.0056	0.1093
Chi2 (9)	5.69			
Prob > chi2	0.7702			

Note: The standard error in the Hausman test for the difference between fixed effects and random effects estimators is calculated as $\sqrt{\mathrm{diag}(V_b - V_B)}$, where V_b is the variance-covariance matrix of the fixed effects estimator and V_B is that of the random effects estimator.

Source: own calculation.

References

Abor, J., & Bokpin, G. A. (2010). Investment opportunities, corporate finance, and dividend payout policy: Evidence from emerging markets. *Studies in Economics and Finance*, *27*(3), 180–194. https://doi.org/10.1108/10867371011060018

Aivazian, V. A., Booth, L., & Cleary, S. (2003). Do emerging market firms follow different dividend policies from US firms? *Journal of Financial Research*, *26*(3), 371–387. https://doi.org/10.1111/1475-6803.00064

Ali, A., Jan, F. A., & Atta, M. (2015). The impact of dividend policy on firm performance under high or low leverage: Evidence from Pakistan. *Journal of Management Info*, *2*(4), 16–25. https://doi.org/10.31580/jmi.v8i1.48

Baker, M., & Wurgler, J. (2004). A catering theory of dividends. *Journal of Finance*, *59*(3), 1125–1165. https://doi.org/10.1111/j.1540-6261.2004.00658.x

Baker, M., & Wurgler, J. (2006). Investor Sentiment and the Cross-Section of Stock Returns. *The Journal of Finance*, *61*(4), 1645–1680. https://doi.org/10.1111/j.1540-6261.2006.00885.x

Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. *Journal of Economic Perspectives*, *21*(2), 129–152. https://doi.org/10.1257/jep.21.2.129

Baltagi, B. H. (2005). *Econometric analysis of panel data* (3rd ed.). John Wiley & Sons.

Beck, N., & Katz, J. N. (1995). What to do (and not to do) with time-series cross-section data. *American Political Science Review*, *89*(3), 634–647. https://doi.org/10.2307/2082979

Bekaert, G., & Harvey, C. R. (2003). Emerging markets finance. *Journal of Empirical Finance*, *10*(1–2), 3–55. https://doi.org/10.1016/S0927-5398(02)00054-3

Belhoula, M. M., Mensi, W., & Naoui, K. (2024). The impact of investor sentiment, uncertainty indices, and macroeconomic factors on efficiency of G7 stock markets. *Quality & Quantity*, *58*, 2855–2886. https://doi.org/10.1007/s11135-023-01780-y

Berger, D. (2022). Investor sentiment: A retail trader activity approach. *Review of Accounting and Finance*, *21*(2), 61–82. https://doi.org/10.1108/raf-06-2021-0152

Bissoondoyal-Bheenick, E., Do, H., Hu, X., & Zhong, A. (2022). Sentiment and stock market connectedness: Evidence from the U.S. – China trade war. *International Review of Financial Analysis*, *80*, 102031. https://doi.org/10.1016/j.irfa.2022.102031

Bon, S. F., & Hartoko, S. (2022). The effect of dividend policy, investment decision, leverage, profitability, and firm size on firm value. *European Journal of Business and Management Research*, *7*(3), 7–13. https://doi.org/10.24018/ejbmr.2022.7.3.1405

Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. *Political Analysis*, *14*(1), 63–82. https://doi.org/10.1093/pan/mpi014

Brav, A., Graham, J. R., Harvey, C. R., & Michaely, R. (2005). Payout policy in the 21st century. *Journal of Financial Economics*, *77*(3), 483–527. https://doi.org/10.1016/j.jfineco.2004.07.004

Byun, J., Kim, K., Liao, R. C., & Pan, C. (2021). The impact of investor sentiment on catering incentives around the world. *Journal of International Financial Markets, Institutions and Money*, *71*, 101285. https://doi.org/10.1016/j.intfin.2021.101285

Dong, M., Robinson, C., & Veld, C. (2005). Why individual investors want dividends. *Journal of Corporate Finance*, *12*(1), 121–158. https://doi.org/10.1016/j.jcorpfin.2004.04.006

Duc, D. T., Hoai, N. T., Nguyen, V. P., Nguyen, D. P., Anh, N. H., & Hai, H. H. (2024). Google Search intensity and stock returns in frontier markets: Evidence from the Vietnamese market. *Economics and Business Review*, *10*(1), 30–56. https://doi.org/10.18559/ebr.2024.1.778

Ferris, S. P., Jayaraman, N., & Sabherwal, S. (2009). Catering effects in corporate dividend policy: The international evidence. *Journal of Banking & Finance*, *33*(9), 1730–1738. https://doi.org/10.1016/j.jbankfin.2009.04.005

Gaies, B., Nakhli, M. S., Ayadi, R., & Sahut, J. M. (2022). Exploring the causal links between investor sentiment and financial instability: A dynamic macro-financial analysis. *Journal of Economic Behavior & Organization*, *204*, 290–303. https://doi.org/10.1016/j.jebo.2022.10.013

Gao, Y., Zhao, C., Sun, B., & Zhao, W. (2022). Effects of investor sentiment on stock volatility: New evidences from multi-source data in China's green stock markets. *Financial Innovation*, *8*(1), 77. https://doi.org/10.1186/s40854-022-00381-2

Goel, G., & Dash, S. R. (2022). Investor sentiment and government policy interventions: Evidence from COVID-19. *Journal of Financial Economic Policy*, *14*(2), 242–267. https://doi.org/10.1108/JFEP-02-2021-0038

Haritha, P. H., & Rishad, A. (2020). An empirical examination of investor sentiment and stock market volatility: Evidence from India. *Financial Innovation*, *6*, 34. https://doi.org/10.1186/s40854-020-00198-x

Hasan, F., Kayani, U. N., Abdel-Razzaq, A. I., & Choudhury, T. (2022). Effect of interest rate changes and dividend announcements on stock returns: Evidence from a frontier economy. *Pakistan Journal of Commerce and Social Sciences*, *16*(4), 639–659.

Hoberg, G., & Prabhala, N. R. (2008). Disappearing dividends, catering, and risk. *Review of Financial Studies*, *22*(1), 79–116. https://doi.org/10.1093/rfs/hhn073

Huynh, T. L. D., Foglia, M., Nasir, M. A., & Angelini, E. (2021). Feverish sentiment and global equity markets during the COVID-19 pandemic. *Journal of Economic Behavior & Organization*, *188*, 1088–1108. https://doi.org/10.1016/j.jebo.2021.06.016

Kamath, A. N., Shenoy, S. S., Abhilash, Subrahmanya Kumar, N., & Deekshitha. (2024). Overview of the nexus between investor sentiment-return relation: A global perspective. *Vision: The Journal of Business Perspective*. https://doi.org/10.1177/09722629231211399

Kamath, A. N., Shenoy, S. S., & Kumar, N. S. (2022). An overview of investor sentiment: Identifying themes, trends, and future direction through bibliometric analysis. *Investment Management and Financial Innovations*, *19*(3), 229–242. https://doi.org/10.21511/imfi.19(3).2022.19

Kluzek, M., & Schmidt-Jessa, K. (2022). Special state aid measures during COVID-19 and corporate dividend policy: Early evidence from Polish public companies. *Economics and Business Review*, *8*(1), 72–89. https://doi.org/10.18559/ebr.2022.1.5

Kumar, P., & Sinha, P. (2024). Changing dividend payout behavior and predicting dividend policy in emerging markets: Evidence from India. *Investment Management and Financial Innovations*, *21*(1), 259–274. https://doi.org/10.21511/imfi.21(1).2024.20

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency problems and dividend policies around the world. *Journal of Finance*, *55*(1), 1–33. https://doi.org/10.1111/0022-1082.00199

Leary, M. T., & Michaely, R. (2011). Determinants of dividend smoothing: Empirical evidence. *Review of Financial Studies*, *24*(10), 3197–3249. https://doi.org/10.1093/rfs/hhr072

Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *American Economic Review*, *46*(2), 97–113. https://www.jstor.org/stable/1910664

Lubis, E., Khaddafi, M., & Satriawan, B. (2024). Dividend policy as a tool to increase firm value. *Business and Investment Review*, *2*(3), 20–27. https://doi.org/10.61292/birev.109

Mahirun, M., Jannati, A., Kushermanto, A., & Prasetiani, T. R. (2023). Impact of dividend policy on stock prices. *Acta Logistica*, *10*(2), 199–208. https://doi.org/10.22306/al.v10i2.375

Mampouya, J. O. (2024). *It's okay to be sentimental: A study of investor sentiment in emerging markets*. Working Paper. SSRN. https://doi.org/10.2139/ssrn.5138146

Maurya, P. K., Bansal, R., & Mishra, A. K. (2025). Investor sentiment and its implication on global financial markets: A systematic review of literature. *Qualitative Research in Financial Markets*. https://doi.org/10.1108/qrfm-04-2024-0087

Michaely, R., & Roberts, M. R. (2012). Corporate dividend policies: Lessons from private firms. *Review of Financial Studies*, *25*(3), 711–746. https://doi.org/10.1093/rfs/hhr108

Musina, B. O., & Tenai, J. (2018). Effect of age diversity on dividend policy in Kenya. *International Journal of Advances in Management, Economics and Entrepreneurship*, 10(25), 57–61.

Novy-Marx, R. (2012). Is momentum really momentum? *Journal of Financial Economics*, *103*(3), 429–453. https://doi.org/10.1016/j.jfineco.2011.05.003

Nyakurukwa, K., & Patnaik, I. (2023). The evolution of studies on social media sentiment in stock markets: A bibliometric analysis. *Scientific African*, *20*, e01596. https://doi.org/10.1016/j.sciaf.2023.e01596

Osman, A., Pyeman, J., Jaafar, M. S., Sundram, V. P. K., & Zakaria, S. (2024). *Impact of inflation on dividend determinants and dividend payout.* 9th International Conference on Marketing and Retailing. European Proceedings of Social and Behavioural Sciences (EpSBS).

Pieloch-Babiarz, A. (2021). The monitoring role of multiple large shareholders and the catering effect of dividends: Evidence from Poland. *Economics and Business Review*, *7*(4), 72–93. https://doi.org/10.18559/ebr.2021.4.5

Prasad, S., Mohapatra, S., Rahman, M. R., & Puniyani, A. (2023). Investor sentiment index: A systematic review. *International Journal of Financial Studies*, *11*(1), 6. https://doi.org/10.3390/ijfs11010006

Qureshi, A. A. (2025). What makes stocks sensitive to investor sentiment: An analysis based on Google Trends. *Economics and Business Review*, *11*(2), 39–65. https://doi.org/10.18559/ebr.2025.2.1790

Romus, M., Anita, R., Abdillah, M. R., & Zakaria, N. B. (2020). Selected firms environmental variables: Macroeconomic variables, performance and dividend policy

analysis. *IOP Conference Series: Earth and Environmental Science*, *469*, 012047. https://doi.org/10.1088/1755-1315/469/1/012047

Santi, C., & Zwinkels, R. C. J. (2023). Investor climate sentiment and financial markets. *International Review of Financial Analysis*, *86*, 102490. https://doi.org/10.1016/j.irfa.2023.102490

Schmeling, M. (2009). Investor sentiment and stock returns: Some international evidence. *Journal of Empirical Finance*, *16*(3), 394–408. https://doi.org/10.1016/j.jempfin.2009.01.002

Wahyuni, S. F., & Peride, F. R. (2021). Influence of investment opportunity set, operating profit margin, cash flow from operating activities and cash flow to equity on dividend policy on a metal company listed on the Indonesia Stock Exchange. *Multidisciplinary Output Research For Actual and International Issue*, *1*(2). https://doi.org/10.54443/morfai.v1i2.102

Wang, W., Su, C., & Duxbury, D. (2022). The conditional impact of investor sentiment in global stock markets: A two-channel examination. *Journal of Banking & Finance*, *138*, 106458. https://doi.org/10.1016/j.jbankfin.2022.106458

Wang, Z. (2023). Investor sentiment and the stock market. *Highlights in Business, Economics and Management*, *21*, 346–351. https://doi.org/10.54097/hbem.v21i.14424

Willett, T. D. (2024). Some implications of behavioral finance for international monetary analysis. *Economics and Business Review*, *10*(1), 7–29. https://doi.org/10.18559/ebr.2024.1.1193