ASYMMETRIC INFORMATION AND DIVIDEND PAYOUT POLICY: EVIDENCE FROM BANGLADESH

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Abstract

This study aims to explore the relationship between information asymmetry and dividend payout policy in the context of Bangladesh's capital market. The study used the trade volume ratio as a proxy for information asymmetry (independent variable) and the cash dividend to book value of total assets ratio as the dependent variable. Fixed effects model and panel corrected standard error (PCSE) model have been used to check the hypothesis. The final sample size of the study comprises 1638 firm years which means total 117 companies traded on Dhaka Stock Exchange from 2010 to 2023. The results reveal compelling evidence of a significant association between asymmetric information and dividend payout policy in Bangladesh. This study documents that dividend payments are negatively influenced by information asymmetry. That means firms facing higher levels of information asymmetry tend to adopt more conservative dividend policies, characterized by lower dividend payout ratios. In the context of this study, we used the payout ratio as a proxy for dividend policy due to its widespread use in previous literature and its ability to capture firms' immediate cash distribution decisions. Thus, the findings align with the agency theory and pecking order theory but contradict the signaling theory. Due to limitations in the available data, this study could not incorporate alternative proxies for information asymmetry. Additionally, this study excludes financial firms, which could be considered in future studies. Results of the study contribute to the existing literature on corporate finance and provide valuable insights for policymakers, investors, and corporate managers navigating the challenges of information asymmetry in capital markets. To the best of the authors' knowledge, research on the relationship between information asymmetry and dividend policy within the context of Bangladesh's capital market remains scarce. Notably, no prior studies have employed the trade volume ratio as a proxy for information asymmetry to rigorously examine the dynamics between information asymmetry and dividend payout policy in this market.

Keywords *Dividend policy, Information asymmetry, Pecking order theory, Agency theory, Signaling theory*

JEL Code: G14, G32, G35, G38, O20

Paper Type Research paper

1. INTRODUCTION

The crucial constituent of corporate finance theory is the theory of dividend policy which determines how a business distributes its profits to shareholders. The presence of asymmetric information gives managers an edge over having non-public material information that is unavailable to investors. The present study examines the correlation between asymmetric information and dividend distribution policy for an LDC graduating country- the capital market of Bangladesh.

Modigliani and Miller's (1961) famous theory changed the perceptions of corporations in terms of dividend payment. The theory showed the irrelevance of dividend policy to firm value under an efficient and perfect capital market. Later different controversies in corporate finance were incorporated. Different theories were developed to determine the dividend behavior of corporations. Easterbrook, (1984) provided the theory of agency problem explaining dividend distribution as substantial during high conflicts of interest between agents and principles. The theory of pecking order developed by (Myers, 1984) is another evidence trying to explain the relationship between the availability of internal funding and external financing needs. Also, the emergence of life cycle theory by Fama and French, (2001), signaling theory by Rock & Miller, (1985), and catering theory by Baker and Wurgler, (2004) enhance the field of corporate finance. Despite so many existing theories, dividend is still a puzzle in many developed countries (Benlemlih, 2019), let alone emerging countries. Inspired by the above theories, the study seeks to find out the impact of information asymmetry on firms' dividend payment policies of companies listed in Bangladesh's Capital Market.

Bangladesh's capital market presents unique characteristics that warrant a focused study. Unlike developed economies, emerging markets like Bangladesh are often marked by higher levels of

information asymmetry due to factors such as limited financial infrastructure, lower investor sophistication, and sparse analyst coverage (World Bank, 2020). Cultural and economic factors also play a crucial role. In Bangladesh, investors often exhibit risk-averse behavior and a preference for immediate returns, potentially influencing corporate dividend policies. The country's impending graduation from LDC status introduces additional macroeconomic dynamics, creating a unique backdrop for studying dividend behavior. These factors highlight why findings from developed or other emerging markets may not fully apply to Bangladesh, underscoring the importance of contextualizing this research.

This research aims to contribute to the ongoing debate by examining how Bangladeshi firms utilize dividend payouts to signal valuable private information to investors in an informationally imperfect market. Financial theories offer valuable frameworks for exploring the potential influence of asymmetric information on dividend policy. Signaling theory, for instance, proposes that firms with positive private information regarding future profitability may choose to signal this information through higher dividend payouts (Bhattacharya, 1979). According to this theory, better-informed managers want to use dividends as a signal to communicate private information to less-informed investors. Thus, a positive relationship can be anticipated between information asymmetry and dividend payout policies. Another argument is based on the pecking order theory (Myers, 1984). This theory states that firms with higher information asymmetry tend to experience costlier external capital and this results in under-investment problems. To mitigate this problem managers, use internal funds (retained earnings) and thus pay lower dividends to the shareholders. According to this theory firms with higher information asymmetry tend to pay lower dividends and thus a negative relationship is anticipated.

According to agency theory, managers and shareholders may experience an agency conflict as a result of asymmetric information (Jensen & Meckling, 1976). Managers might rather keep more money for empire-building or other endeavors that might not be optimal for shareholders.

There have been several schools of thought that tried to seek the reason for giving out dividends based on the availability of information in the investment environment. Some studies support the signaling effect. For instance, Lin et al. (2012) in China found a positive correlation between dividend payout and future profitability, suggesting firms with better prospects use dividends to signal this information. Previous US studies (Deshmukh, 2005; Li and Zhao, 2008), and UK studies (Basiddiq and Hussayney, 2012) found that firms with higher information asymmetry tend to distribute lower dividends is contrast to the traditional signaling effect. In their 2008 study of the Dhaka Stock Exchange in Bangladesh, Rashid & Rahman discovered a positive but non-significant correlation between stock price volatility and dividend yield. This implies that dividend policy may not be a reliable indicator in their particular market. Aggarwal (2012) discovered a strong correlation between information asymmetry and dividend payment practices in another study including cross-listed companies on U.S. stock markets. Such inconsistencies highlight the need to re-examine these theories in the Bangladeshi context.

Considering different theories and empirical evidence, this paper attempts to solve the puzzle from the Bangladesh Capital Market perspective by showing the relationship between information asymmetry and dividend payout policies. The contribution of this research is twofold. First, it provides empirical evidence on the relationship between asymmetric information and dividend policy in the context of the Bangladesh capital market. This can offer valuable insights for Bangladeshi companies when formulating their dividend payout strategies. Second, the findings

can contribute to a broader understanding of dividend policy in emerging markets with unique characteristics, potentially informing future research and policy decisions.

By analyzing the dividend payout behavior of Bangladeshi firms in relation to information asymmetry, this research aims to shed light on how companies in this emerging market utilize dividend policy to communicate with investors in the face of imperfect information. Thus this study not only addresses a gap in the literature but also validates the importance of investigating corporate finance theories in diverse economic contexts. The findings are expected to guide both firms and investors in navigating the complexities of the Bangladesh capital market.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Literature Review

2.1.1. Theoretical Framework

Dividend policy, a cornerstone of corporate finance, dictates the distribution of a company's profits to shareholders. Determining the optimal dividend payout strategy is a complex decision with significant implications for both firms and investors. A key factor influencing this decision is asymmetric information, where managers possess a deeper understanding of the company's prospects compared to external investors (Myers & Majluf, 1984). This information asymmetry can be exploited by management to their advantage, creating a potential conflict of interest.

Several financial theories offer valuable frameworks for exploring the relationship between asymmetric information and dividend policy:

Signaling theory proposes that firms with positive private information regarding future profitability may choose to signal this information through higher dividend payouts (Bhattacharya,

1979). This strategy aims to attract investors seeking stable and predictable cash flows, potentially leading to a higher stock price. Conversely, firms with negative private information may choose to limit or even eliminate dividend payouts to avoid negative market reactions. **Agency theory** suggests that asymmetric information can create an agency conflict between managers and shareholders (Jensen & Meckling, 1976). Managers may prefer to retain excess cash for empire-building or other activities that are not necessarily in the best interest of shareholders. **The clientele effect** proposes that firms attract a specific investor base with their dividend policy. Companies with a loyal investor base seeking stable income might prioritize consistent dividend payouts, even if it's not a strong signal of future profitability (Baker & Bradley, 2002). Proposed by Myers and Majluf (1984), the **pecking order theory** suggests that firms prioritize financing investment opportunities using internal funds (retained earnings) over external financing (debt and equity) due to the asymmetric information between managers and investors.

2.1.2. Previous Study Results

The empirical evidence on the relationship between asymmetric information and dividend policy is somewhat mixed. Some studies support the signaling effect. For instance, Lin et al. (2012) in China found a positive correlation between dividend payout and future profitability, suggesting firms with better prospects use dividends to signal this information. Lintner (1956) found that firms with stable earnings are more likely to pay dividends, suggesting that they use dividends to signal earnings stability to investors. Similarly, in the context of emerging markets, such as India and China, studies by Allen et al. (2000) and Chen et al. (2009) have provided empirical support for the signaling hypothesis, indicating a positive relationship between dividend payouts and firm value. Tran et al. (2020) examined firms in Vietnam and identified that dividends were used as a signaling tool in markets with high information asymmetry. Zare et al. (2013) also investigated

this perspective and discovered that dividend policies can influence market views in circumstances with strong information asymmetry.

Using a sample of companies listed on the Australian Securities Exchange (ASX), Banyi, Nguyen, and Routledge (2018) examined the effects of asymmetric knowledge on dividend policy and market liquidity. According to the bid-ask spread, the authors discovered that companies with higher degrees of asymmetric knowledge typically had lower dividend payment ratios. This implies that companies with higher levels of information asymmetry are less inclined to provide dividends, maybe as a result of worries about adverse selection. Barbedo and Lemgruber (2019) used data from the Brazilian stock market to examine the connection between dividend policy and asymmetric information. According to their empirical research, dividend payout ratios and asymmetric information are negatively correlated. In particular, businesses that deal with more asymmetric information typically have lower dividend payments, indicating that more severe information asymmetry makes them less likely to pay dividends. The results of this study corroborate the hypotheses of signaling theory and pecking order theory, which postulate that companies with higher levels of information asymmetry would be hesitant to pay dividends because they fear adverse selection and conveying unfavorable information to investors. In emerging markets, a study on the Korean stock market discovered a negative association between information asymmetry and dividend yields, implying that firms with greater information asymmetry pay lower dividends (Kim et al., 2021).

Leffert (1996) argues that higher information asymmetry in emerging markets might lead firms to prioritize retaining cash for future investment opportunities, potentially reducing the signaling power of dividends. This necessitates further research to understand how Bangladeshi firms utilize dividend policy in an informationally opaque environment.

2.2 Hypothesis Development

Prior studies recognize that information asymmetry leads to agency conflicts between managers and market participants. Financial market frictions are caused by moral hazard and adverse selection which occur due to asymmetric information. Agency theory predicts that information asymmetry and dividend payment policies are negatively related (Richardson, 2000). Pecking order theory also offered the same insight (Myers, 1984). Managers favor internally generated cash over expensive external sources of funding because adverse selection is more expensive. As a result, they offer reduced payouts that forecast a negative correlation with asymmetric data. (1979, Bhattacharya). The outcomes of empirical research are also conflicting. Deshmukh (2000) discovered a negative correlation between dividend payout and information asymmetry when looking at 446 US companies. However, Morri et al. (2020) discovered a positive correlation between dividend payout and information asymmetry.

As far as the author is aware, literature is scarce about dividend payments and information asymmetry from the standpoint of Bangladesh. We think that the signaling theory is unable to forecast a company's likelihood of paying dividends. Weak corporate governance mechanisms and ownership concentrations may cause severe information gaps that could result in extrapolations activities (Chazi et.al., 2011). A study conducted by De Angelo et al. (2004) concluded that signaling theory is not so strong to dictate a firm's dividend policies. Khan et al. (2022) found that South Asian markets have unique corporate governance and institutional obstacles, indicating that signaling theory has a lower predictive potential in these circumstances. Thus, we anticipate an inverse relationship between information asymmetry and dividend payments. Based on the above discussion we develop the following hypothesis.

H1: There is a significant negative association between information asymmetry and dividend payments.

3. RESEARCH METHODOLOGY

3.1. Data and Sample Selection

The data for this study was gathered from the annual reports of all manufacturing enterprises operating from 2010 to 2023. This study included a total of 19 sectors. According to earlier research, the financial sector is excluded from that list because of many limitations that contribute to the accrual structure's distinct nature (Albersmann & Quick, R., 2020). Due to insufficient information, some businesses were shut down. The final sample size consists of 1638 firm-years, or 117 companies that were active on the Dhaka Stock Exchange between 2010 and 2023. Table 1 summarizes the sample data by sector.

Table 1: ***Sectors and number of companies used in the study (Source: Authors' Own)***

Name of Sectors	Sample Companies	Percentage
Paper & Printing	1	0.9%
IT Sector	5	4.3%
Travel & Leisure	1	0.9%
Telecommunications	1	0.9%
Engineering	17	14.5%
Jute	2	1.7%
Fuel & Power	11	9.4%
Services and Real Estate	3	2.6%
Textiles	22	18.8%
Food & Allied	13	11.1%
Pharmaceuticals and Chemicals	18	15.4%
Cement	5	4.3%
Miscellaneous	8	6.8%
Ceramics	5	4.3%
Tannery	5	4.3%
Total	117	100.0%

3.2. VARIABLES

3.2.1. Dependent variable

The dividend payment level, as determined by cash dividends to asset book value, is the study's dependent variable. We use total assets as a scalar instead of market capitalization and earnings for several reasons. The first reason is that various unethical accounting techniques might be used to manipulate accounting earnings (Benlemlih, M., 2019). Another study noted that when earnings are low, the payout ratio based on earnings may become unstable. As a result, conclusions drawn from profits could be incorrect (Aivazian et al., 2003). The reason dividend yield is rarely used as a proxy for dividend distribution is that managers cannot directly impact a firm's security prices (Jory et al., 2017). Finally, stock dividends increase the number of shares outstanding, complicating return calculation and eroding per-share metrics. This intricacy can make it difficult to separate the influence of stock dividends on shareholder value (Fama & French, 1992). Thus stock dividends have not been considered in this study. This study also used cash dividend per share as a proxy of dividend payment level. Different studies used cash dividends as a proxy of dividend payout level. A study explored by Qi, et al. (2022) used cash dividend payments to see how cash dividends are related to firm value, particularly in state-owned enterprises. This study incorporated this variable to see whether the alternate variable has a different impact or not.

3.2.2. Independent Variables

Relevant and trustworthy information is required to make informed investment decisions. Asymmetric information arises when investors do not have relevant information that is available to the corporate insiders. Due to asymmetric information in the market, investors make suboptimal decisions and incur significant losses in their investment portfolios (Huynh et al.,2020). Prior studies used some proxies of Information asymmetry such as bid-ask spread (Al-Hiyari et al.,

2024). Other proxies of information asymmetry are forecast error (H., and Stein, J.C.,1999), trade volume volatility (Bollerslev, T.,1986), and trade volume ratio (Easley et al, 1996). This study uses the trade volume ratio as the proxy of information asymmetry due to available data. It contrasts a stock's trading volume with the total number of outstanding shares. Increased information flow or discrepancies in information among market players may be indicated by a higher transaction volume in relation to the total number of outstanding shares. Huynh et al. (2020) investigated the effects of information asymmetry on firm value in Vietnamese businesses. Their research emphasizes the importance of information asymmetry in financial markets, arguing that trading volume can be used to measure information flow among investors. Al-Hiyari et al. (2024) investigated the market microstructure and information asymmetry and discovered that measures such as trade volume and bid-ask spreads are important indicators of market participants' information availability and decision-making behavior. The trade volume ratio, in particular, is viewed as a measure of the market's information efficiency. Another study mentioned different information asymmetry proxies such as share turnover and bid-ask spread. Share turnover is calculated by dividing the total number of shares exchanged during a given time by the average number of shares outstanding during that same period (Kinyua, B, 2022). Considering different proxies and available data we have chosen trade volume ratio as a proxy of information asymmetry for this study.

3.2.3. Control Variables

For this study, we determine a set of control variables that have been used in previous studies. First, we consider control for a firm's profitability (OPTA). Firms with higher profitability tend to have higher free cash flow and distribute higher dividends (Benlemlih, M., 2019). Thus, a positive relationship is anticipated between profitability and dividend payments (La Porta et al.,2000).

Second, we consider the firm's age as a control variable, and a positive relationship is anticipated between firm age and dividend policy (Brav et al., 2005). That means older firms tend to pay more dividends. Third, we include firm size as a control variable. According to Allen et al. (2000), larger firms tend to pay higher dividends than smaller firms. Therefore, we anticipate a positive relationship between firm size and dividend payments. Fourth, we include firm leverage as a control variable and anticipate a negative relationship between leverage and dividend payments. According to the pecking order theory, highly leveraged firms are reluctant to distribute more dividends (Fama, E.F., and French, K.R.,2002). Fifth we consider control for growth in asset and market-to-book ratio. We anticipate that firms with growth prospects tend to pay lower dividends as they may prefer to reinvest earnings to finance growth opportunities rather than distribute dividends to shareholders (Rozeff, M.S., 1982). Sixth, we consider GDP growth and market return as control variables to see whether the macro environment has a major impact on firms' dividend payments or not (Campbell, J.Y., and Shiller, R.J.,1988). Thus, we are assigning no prediction for these variables. Table 2 contains the measures for the test variables.

Table 2: Variable Definitions

Variable Level	Symbol	Measure
Dependent Variable	CDBV (Dividend Payout Level)	Cash dividends deflated by book value
	Cash Dividend	Cash Dividend per share in amount
Independent Variable	TVR (Trade Volume Ratio)	Ln (Trade Volume / Total Number of Outstanding shares)
Control Variables	OPTTA (Operating profit to total asset)	The ratio of operating profit to total asset
	Firm Age	Log of firm age
	Firm Size	**Log of total assets**
	D to A	The ratio of total debt to total asset
	Growth	Growth in asset
	MBV	Market-to-book value ratio is calculated as market capitalization divided by the book value of equity.

	GDP growth	Growth in GDP
	COVID	Dummy Variable
	DSE return	Percentage change in DSE return

3.3 Model Specification and Estimation Procedure

This study employs the following model to empirically test the impact of trade volume ratio on corporate dividend payout policy.

$$\boldsymbol{CDBV = \beta 0 + \beta 1 TVR + \beta 2 OPTTA + \beta 3 \log(Firm\ Age) + \beta 4 \log(Firm\ Size) + \beta 5 DtoA +}$$

$$\boldsymbol{\beta 6 Growth\ in\ Asset + \beta 7 MBV + \beta 8 GDP\ Growth + \beta 9 COVID + \beta 10 DSE\ Return + \epsilon} \text{ ---- Model 1}$$

$$\boldsymbol{Cashdividend = \beta 0 + \beta 1 TVR + \beta 2 OPTTA + \beta 3 \log(Firm\ Age) + \beta 4 \log(Firm\ Size) + \beta 5 DtoA +}$$

$$\boldsymbol{\beta 6 Growth\ in\ Asset + \beta 7 MBV + \beta 8 GDP\ Growth + \beta 9 COVID + \beta 10 DSE\ Return + \epsilon} \text{ ---- Model 2}$$

Here, $\beta 0$ is the intercept of the regression model; $\beta 1$, $\beta 2$,…, $\beta 10$, $\beta 1$, $\beta 2$,…,$\beta 10$ are the coefficients for the respective independent and control variables and ϵ is the error term.

Given the nature of the data panel data regression models have been implied in this study. Fixed effects model and panel corrected standard error (PCSE) model have been used to check the hypothesis. PCSE has been used to correct standard errors for potential cross-sectional dependence and Heteroskedasticity (Figure: 01).

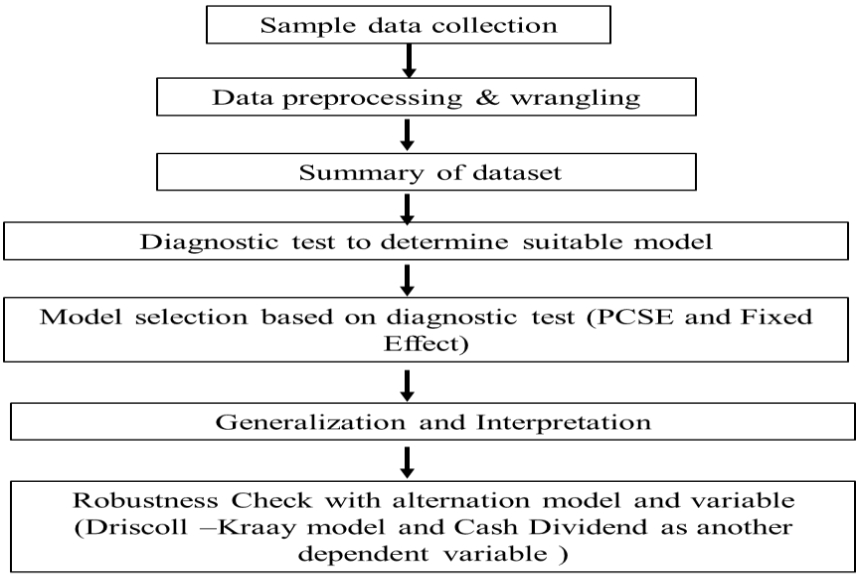

Figure 01: Conceptual Framework of the Study

4. EMPIRICAL RESULTS

4.1. Descriptive Statistics

Summary statistics for all variables used in the panel regression models are seen in Table 3. The dependent variable, CDBV (Dividend Payout Level), shows an average value of 0.0565 indicating that firms generally distribute a small portion of their book value as dividends with substantial variability evidenced by a standard deviation of 0.7840. Another proxy-dependent variable called cashdividend shows an average dividend payment in cash by a company is 39% of the face value. The independent variable, TVR (Trade Volume Ratio), has an average of -5.3251, suggesting a generally negative trade volume ratio with significant dispersion. Control variables such as firm age, D to A, and OPTTA show considerable variability, highlighting differences in firm characteristics. MBV indicates substantial differences in market valuations among firms. GDP growth exhibits moderate variability. Growth in assets and DSE return also display significant variability, reflecting diverse growth rates and stock market performance. The COVID dummy variable shows that 14% of observations are from periods affected by the pandemic. Firm size,

measured as the log of total assets, averages 9.41 with high variance underscoring the differences in firm sizes.

Table 4 represents the pairwise correlations among all predictor variables included in our regression model. Variable inflation factor (VIF) statistics from Table 5 confirm the nonexistence of multicollinearity with the highest value of 2.49 and mean VIF of 1.53. The result of the presence of heteroscedasticity, autocorrelation, and cross-sectional dependence in panel data in both models is shown in Table -06 to table-08. Hausman test reveals that the fixed effect model is better aligned to both of these models as evidenced in the table-09. However, for the presence of heteroscedasticity, autocorrelation, and cross-sectional dependence, Panel-corrected Standard error (PCSE) and Driscoll-Kraay standard errors (DKSE) models are considered robust models to interpret the result of the study.

Table 3: Summary Statistics

Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
cashdividend	1,638	0.39	1.24	0	16.5
cdbv	1,638	0.05	0.72	0.00	25.59
Ln(tvr)	1,638	-5.45	2.17	-14.90	5.15
firmage	1,638	1.45	0.24	0.60	2.07
firmsize	1,638	9.41	0.79	6.35	11.74
dtoa	1,638	1.76	27.09	0.00	616.46
optta	1,636	0.06	2.10	-10.55	75.67
mbv	1,638	5.02	13.10	-37.20	248.40
gdpgr	1,638	0.06	0.01	0.03	0.08
growthinassets	1,521	1.56	37.37	-1.00	1054.87
covid	1,638	0.14	0.35	0.00	1.00
dsexreturn	1,638	0.06	0.26	-0.35	0.63

Diagnostic Test

Table 4: Correlation Matrix

Correlation Matrix	tvr	firmsize	firmage	dtoa	optta	mbv	cdbv	covid	gdpgr	dsex return	growth in assets
tvr	1.0										
firmsize	-0.3	1.0									
firmage	-0.1	0.0	1.0								
dtoa	0.0	-0.2	0.0	1.0							
optta	0.0	-0.1	0.0	0.5	1.0						
mbv	-0.1	-0.2	0.1	0.0	0.0	1.0					
cdbv	0.0	-0.1	0.0	0.6	1.0	0.0	1.0				
covid	0.4	0.0	0.1	0.1	0.1	0.0	0.1	1.0			
gdpgr	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	-0.5	1.0		
dsexreturn	0.4	0.0	0.1	0.0	0.0	-0.1	0.0	0.2	0.4	1.0	
growth in assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0

Table 5: Result of VIF

Variable	VIF	1/VIF
covid	2.49	0.40
gdpgr	2.33	0.43
dsexreturn	1.79	0.56
tvr	1.72	0.58
dtoa	1.36	0.73
optta	1.29	0.78
firmsize	1.24	0.81
mbv	1.06	0.94
firmage	1.06	0.94
growthinasssets	1	1.00
Mean VIF	1.53	

Source: Authors' calculation

Table-06 Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity

Model	chi2	Prob>chi2	Presence of Heteroscedasticity
cdbv	797.36	0.0000	Yes
cashdividend	2059.93	0.0000	Yes

Table-07 Wooldridge Test for Autocorrelation in Panel Data

Model	F value	Prob>F	Presence of Autocorrelation
cdbv	5.585	0.02	Yes
cashdividend	4.998	0.02	Yes

Table-08 Pesaran's Test of Cross-Sectional Independence

Model	Pesaran's Value	Friedman's Value	P-Value	Presence of Cross-Sectional Dependence
cdbv	30.799	172.976	0.00	Yes
cashdividend	72.17	256.884	0.00	Yes

Table-09 Hausman Test

Model	Chi-Square value	Prob>Chi2	Fixed Effect or Random Effect
cdbv	26.85	0.004	Fixed Effect
cashdividend	244.98	0.000	Fixed Effect

4.2 Regression Analysis: Panel Data Model

Results of multivariate regressions are displayed in Tables 5 and 6. Table 5 reveals significant insights into the factors influencing CDBV based on 1,638 observations from 117 groups. The model explains a substantial portion of the variance, with within-group R-squared at 97.54%. Consistent with the hypothesis revealing that the coefficient of TVR is negatively and significantly linked up with the dividend payout ratio (β= -0.01, P= 0.02). This finding defies the signaling theory's prediction by showing that companies with strong information asymmetry provide their shareholders with less dividends. The main conclusions show that while Firm Size has a negative impact on CDBV, Operating Profit to Total Assets, Debt to Asset Ratio, Firm Age, and Market-to-Book Value Ratio (mbv) have a largely favorable impact. There are no discernible effects from firm age, GDP growth, asset growth, COVID (COVID) impact, or stock return. The model's overall fit is robust, indicated by an F-statistic of 11802.57, confirming the significance of the predictors.

Table 5: Results under Fixed Effect Model

Variables	Coef.	t	P>| z |
TVR	-0.01	-2.29	0.02**
OPTTA	0.30	266.08	0.00***
Firm Age	0.07	2.06	0.03**
Firm Size	-0.08	-6.79	0.00***
DtoA	0.01	48.88	0.00***
Growth in Asset	-0.01	-0.01	0.98
MBV	0.01	0.27	0.79
GDP Growth	0.16	0.52	0.60
COVID	0.00	1.01	0.314
Dsereturn	0.00	0.67	0.51
Constant	0.62	6.33	0.00***
R-Sq	97.54%		
F(116, 1159)	11802.57		
Prob>F	0.00		

Note: * represents significance at 10% level, ** represents significance at 5% level and *** represents significance at 1% level

The Prais-Winsten regression with correlated panels corrected standard errors (PCSEs) has been used to address serial correlation and Heteroskedasticity in panel data. The R-squared value of 0.99 indicates that the model explains 99% of the variability in the dependent variable, and the Wald chi-squared statistic is highly significant ($p < 0.0000$), suggesting that the independent variables collectively have a strong explanatory power. The results utilizing CDBV as the dependent variable show that independent variables significantly affect the dependent variable "CDBV". "TVR ", and "Firm Size" have significant negative impacts, while "OPTTA", "DtoA", "MBV", "GDP Growth", and "COVID" have significant positive impacts. Variables "Firm Age", "Growth in Asset", and "Dse return" do not show significant effects on "CDBV", indicating no reliable relationship. Additionally, contrary to the signaling theory's prediction, this model shows that companies with substantial information asymmetry pay out less dividends to shareholders. Using cash dividends as another dependent variable the study also shows similar results reinforcing the negative correlation between trading volume and cash dividends. This finding is consistent

with the idea that enterprises with larger information asymmetry retain earnings rather than distribute dividends.

Table 6: Summary of Prais-Winston Linear Regression PCSE Analysis

Variables	cdbv			cashdividend		
	Coef.	z	P>|z|	Coef.	z	P>|z|
TVR	-0.010	-2.78	0.005***	-0.148	-4.14	0.000***
OPTTA	0.300	120.43	0.000***	0.004	0.85	.393
Firm Age	0.030	1.07	0.285	0.666	6.91	0.000***
Firm Size	-0.010	-1.74	0.082*	0.221	7.70	0.000***
DtoA	0.005	51.61	0.000***	-0.001	-0.29	0.769
Growth in Asset	-0.002	-0.02	0.986	-0.000	-0.77	0.441
MBV	0.00	2.42	0.015**	0.022	4.14	0.000***
GDP Growth	0.44	1.86	0.062*	4.495	1.22	0.223
COVID	0.02	2.29	0.02**	0.394	2.80	0.005
Dse return	0.003	0.29	0.768	0.548	3.44	0.001***
Constant	-0.017	-0.30	0.760	-3.925	-12.77	0.000***
R-Sq	0.990			0.15		
Chi2	16366.06			658.97		
Prob>Chi2	0.000			0.000		

Note: * represents significance at 10% level, ** represents significance at 5% level and *** represents significance at 1% level

4.4 Robustness Checks

To support the validity of our main findings, we perform additional investigation in this section. We employ the Driscoll-Kraay standard errors method, which is useful for adjusting for Heteroskedasticity and autocorrelation in panel data analysis. The results of this regression are summarized in Table 7. Using two dependent variables separately, the Driscoll-Kraay standard errors model confirms the validity of our initial findings, emphasizing the importance of information asymmetry in setting dividend distribution decisions. The coefficient for trade volume ratio (TVR)

is negative and statistically significant, indicating that increased information asymmetry, as assessed by the trade volume ratio, is associated with lower dividend payouts.

Table 7: Robustness check using Driscoll-Kraay standard errors Model

	cdbv			cashdividend		
	Coef.	**t**	**P>| t|**	**Coef.**	**t**	**P>| t|**
TVR	-0.013	-4.83	0.000***	-0.148	-3.86	0.002***
OPTTA	0.2989	50.03	0.000***	0.005	1.50	0.160
Firm Age	0.0377	3.94	0.002***	0.667	4.85	0.000***
Firm Size	-0.0109	-1.89	0.083**	0.221	6.03	0.000***
DtoA	0.0057	13.71	0.000***	-0.000	-0.28	0.786
Growth in Asset	-0.0001	-3.52	0.004***	-0.002	-3.94	0.002***
MBV	0.0001	2.16	0.052*	0.022	2.19	0.049**
GDP Growth	0.5711	1.59	0.138	4.495	1.71	0.113
COVID	0.0311	2.92	0.013**	0.395	3.65	0.003***
Dse return	0.0244	1.39	0.191	0.547	2.20	0.048**
Constant	-0.04	-0.80	0.437	-3.925	-8.22	0.000***
R-Sq	0.9817			0.15		
F	32859.01			34453.05		
Prob>F	0.0000			0.0000		

Note: * represents significance at 10% level, ** represents significance at 5% level and *** represents significance at 1% level

5. DISCUSSION

The study's findings provide important light on how dividend distribution policy and asymmetric information interact in the capital market of Bangladesh. The study uses panel data regression models and consistently provides evidence in favor of the hypothesis. Information asymmetry, as measured by the trading volume ratio (TVR), and dividend payout levels (CDBV) are significantly inversely correlated in both the fixed effects model and the panel corrected standard error (PCSE) model. Cash dividend is also negatively related to the trade volume ratio. According to the findings, companies with more knowledge asymmetry typically implement more conservative dividend policies, which are demonstrated by lower dividend payment ratios. This inverse

relationship aligns with the predictions of the pecking order theory and agency theory, which suggest that companies facing significant information asymmetry are more likely to retain earnings to avoid the higher costs associated with external financing and to mitigate potential agency conflicts. Conversely, these results contradict the signaling theory, which posits that firms with favorable private information might use dividends to signal their profitability to the market.

The notion that information asymmetry is a key factor in determining dividend policy is supported by the statistically substantial negative correlation between dividend payout and the trade volume ratio, a proxy for information asymmetry. This result is in line with earlier empirical research conducted in various settings, including Deshmukh (2000) and Banyi et al. (2018), which also noted a propensity for companies with greater information asymmetry to pay out smaller dividends.

Control variables provide additional context to the main findings. For instance, profitability (measured by the operating profit to total assets ratio) shows a positive and significant association with dividend payouts, indicating that more profitable firms tend to distribute higher dividends. Firm size is negatively correlated with dividend payouts, suggesting larger firms in Bangladesh may retain more earnings. The positive impact of the debt-to-asset ratio on dividend payouts could imply that highly leveraged firms might pay more dividends to mitigate agency problems related to debt.

In summary, this research underscores the importance of considering information asymmetry when formulating dividend policies, especially in emerging markets. Future research could further explore this relationship by examining other emerging markets or considering additional variables that influence dividend policy.

6. Conclusion

The research emphasizes the critical role of information asymmetry in shaping dividend policies in emerging markets like Bangladesh. Using the trade volume ratio as a proxy for information asymmetry and the cash dividend to book value of total assets ratio as the dependent variable, the study tests the hypothesis with fixed effects and panel-corrected standard error (PCSE) models. The findings, based on a dataset of 1638 firm-years from 117 companies listed on the Dhaka Stock Exchange (2010-2023), provide strong evidence that firms with higher levels of information asymmetry tend to adopt more conservative dividend policies, as indicated by lower dividend payout ratios. These findings support agency and pecking order theories but contradict the signaling theory.

There are certain drawbacks to this study despite its merits. The findings' applicability is restricted by the absence of substitute indicators for information asymmetry and the omission of financial institutions. By adding other metrics for information asymmetry and expanding the investigation to include financial institutions or other emerging markets, future studies could fill up these gaps.

The study has significant implications for both academia and practitioners. By empirically validating agency and pecking order theories in an emerging market, it contributes to the growing corporate finance literature while challenging the universal applicability of the signaling theory.

The findings are useful for policymakers and corporate leaders in Bangladesh and other emerging markets. Regulators may consider strengthening disclosure rules to eliminate information asymmetry and promote a more transparent market environment. Companies can use the study's findings to develop dividend policies that balance shareholder expectations with internal financial requirements.

Investors can assess a company's financial strategy and stability by examining the relationship between dividend policy and information asymmetry. A wary dividend policy may indicate greater information asymmetry, causing investors to seek further information before making decisions.

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