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New evidence between cost of debt and information disclosure level

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ABSTRACT

This study examines the factors that influence the cost of debt (CoD) among companies listed on the Vietnamese stock market, with a particular focus on the level of information disclosure and financial distress prediction indicators. The samples consist of companies included in the VN100 index, which represents the top 100 largest and most liquid stocks in Vietnam. Data was collected from audited financial statements and annual reports published between 2019 and 2023. The study employs multiple regression analysis to explore the relationship between CoD and various explanatory variables, including firm-specific characteristics (such as firm size, profitability, and governance structures), financial distress indicators (e.g Altman z-score), and the level of information disclosure. The findings indicate a statistically significant correlation between the level of information disclosure, financial distress prediction indicators, and the CoD. Specifically, the results reveal that companies with higher levels of information disclosure tend to face higher debt costs. The counterintuitive outcome suggests that firms may disclosure more detailed information when they are under financial stress or attempting to signal transparency to mitigate lender concerns, which in turn may rise the perceived risk among creditors.

Keywords: *cost of debt, information disclosure level, z-score indicator*

1. INTRODUCTION

The capital structure of a firm primarily consists of debt and equity, both of which carry associated costs when utilized. According to the Pecking Order Theory [1], the Board of Management (BoM) must carefully evaluate their financing sources, whether short-term or long-term, to ensure optimal decision-making. When a firm seeks external financing, the cost associated with this borrowing is known as the CoD. A firm's CoD is influenced by its creditworthiness, meaning that higher costs typically indicate greater perceived risk [2]. Changes in a firm's capital structure can lead to variations in its CoD [1], which is of particular interest to investors since the CoD directly affects the firm's profitability. Specifically, an increase in the CoD can decrease the firm's net profit and impact the decisions of investors. Therefore, effectively managing capital structure is crucial for optimizing the CoD and enhancing shareholder value.

One critical factor that influences the CoD is managerial decision-making and the disclosure of information regarding the firm's capital structure to stakeholders [2]. According to the Stakeholder Theory [3], all stakeholders are concerned with the firm's operations as revealed through the information provided by the company. Information disclosure not only promotes transparency but also affects how investors and other stakeholders perceive the firm's level of risk. By improving transparency, information disclosure helps reduce information asymmetry, which can lead to a lower CoD. Therefore, effective disclosure enhances trust and reduces stakeholders' risk assessments, ultimately resulting in a lower CoD for the firm. In addition, Fonseka et al. [4] found that companies in the warning or distress zones of financial health, as indicated by the z-score [5], typically face a higherCoD. This increase in costs reflects the need for companies to compensate lenders for the greater risks associated with these financial positions.

Recent advancements in technology have given investors access to a wide range of information from various sources, including both official and unofficial channels, as well as verified and unverified data. This abundance of information presents several challenges for stock market

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investors. Studies conducted globally, such as those by Sengupta [2], have shown that a higher level of information disclosure can reduce a firm's CoD. However, in Vietnam, most research has primarily focused on exploring either information disclosure or the CoD in isolation, with limited effort to integrate these two elements within a cohesive research framework.

2. INSTITUTIONAL BACKGROUND AND RELATED LITERATURE

2.1. The conceptions

Information disclosure involves sharing a company's internal information with external stakeholders [2]. Investors require detailed insights into operational performance, governance efficiency, and emerging issues to effectively analyze and evaluate the company's activities. However, information is an abstract concept [6], making it challenging to measure both the extent and quality of the information disclosed directly [2].

Information disclosure plays a critical role in ensuring the efficient allocation of social resources and reducing information asymmetry between companies and stakeholders [7]. Research has demonstrated that information disclosure adds value for shareholders [6]; companies that comply with disclosure regulations tend to experience higher stock prices over a one-year period [2]. Additionally, greater disclosure lowers the cost of capital, further increasing shareholder value. Companies that provide more information attract more investor attention, which renders them less susceptible to market fluctuations in stock prices [8]. As a result, systemic risk is reduced, and the cost of capital decreases correspondingly.

The CoD refers to the expenses a firm incurs when utilizing external financing [1]. Researchers indicate that equity capital generally carries a higher risk, which leads to a higher cost of capital. For this reason, managers often prefer debt financing over issuing new equity to minimize costs.

A firm's capital structure reflects its strategy for securing financial resources through various combinations of equity sales, stock options, bond issuance, or borrowing [9]. Initially, debt financing offers several advantages; a low CoD, combined with the "tax shield" effect, can reduce the weighted average cost of capital (WACC) as debt levels increase. However, as the debt-to-equity ratio rises, shareholders typically demand higher returns, leading to an increase in the cost of equity. As a result, finding the right balance between debt and equity, between the CoD and the cost of equity, is a critical decision for the BoM.

2.2. The related literature

While there are limited theories or models that offer a comprehensive understanding of the relationship between information disclosure and the CoD, modern finance has identified important factors relevant to this study. The foundational theories used to develop research models and assess the impact of information disclosure and z-scores on the CoD typically include Signaling Theory, Asymmetric Information Theory, Static Trade-Off Theory, and Pecking Order Theory.

2.2.1. Signaling theory

Signaling Theory [10] was first introduced in labor market research. According to this theory, employees need to signal their skills and personal information to attract the attention of potential employers. In the context of information disclosure, this means that the information holder should proactively reveal the information they possess to meet the needs of interested parties. Regarding the CoD, the theory suggests that lenders will assess and analyze the risks associated with the loans based on signals emitted by the firm (information disclosure), and they will adjust the CoD accordingly [2].

2.2.2. Asymmetric information theory

Information asymmetry significantly influences various decisions made by firms [1]. According to the Pecking Order Theory, when firms encounter information asymmetry, they prefer debt financing over equity financing. Companies that lack transparency in their information disclosure often face higher capital costs [2]. This indicates that information gaps can diminish a firm's value, as investors may require higher returns to compensate for the increased risks associated with incomplete or unreliable information.

2.2.3. Static trade-off theory

This theory is based on the research of Miller and Modigliani [11], who proposed that a firm's optimal capital structure should be determined by balancing the marginal tax benefits from debt (the tax shield) against the costs associated with debt, including financial distress costs and agency costs. Jensen [12] argued that debt serves as an effective tool for reducing the cost of equity. According to

his view, a firm's optimal debt ratio is determined by weighing the advantages and disadvantages of taking on debt. The CoD reflects this trade-off.

2.2.4. Pecking order theory

Myers and Majluf [13] argued that firms prefer to use internal financing over external financing and choose debt over equity when issuing securities. The authors emphasize the role of information asymmetry, which occurs when information is unevenly distributed between existing and new investors, as well as between managers and investors. Consequently, investors analyze the market to guide their investment decisions. Thus, the issuance of debt and the timing of new security offerings can serve as signals regarding the company's performance.

2.3. The institutional background

A study conducted by Chen and Zhu [8] in China discovered that when indicators of financial distress suggest that a company may face bankruptcy, the CoD rises. This increase serves as compensation for the risks that lenders will assume in the future. The research model, which measured the influence of financial distress prediction models on the CoD, as a market representation of financial risk, demonstrated an inverse relationship between bankruptcy prediction models and the CoD.

In China, a comprehensive study in the energy sector concluded that environmental information disclosure and the type of energy products significantly influence the CoD [4]. Specifically, companies involved in producing natural gas, thermal power, and hydropower experience an increase in the CoD with greater environmental disclosure. In contrast, solar and wind power companies show the opposite trend, where higher environmental disclosure leads to a decrease in the CoD.

Beyer and Dye [14] expanded their analysis from a multinational perspective by utilizing legitimacy and institutional theories to explore whether credit institutions in 15 European countries offer lower interest rates to firms based on their environmental, social, and governance (ESG) performance and the level of information disclosure. Their findings indicated that credit institutions place significant importance on both ESG performance and the corresponding disclosure of this information. They integrated ESG factors into their lending decisions, resulting in a reduced CoD for companies with strong ESG performance. Furthermore, the study revealed that information disclosure regarding ESG performance has an impact on CoD that is comparable to the effect of the actual ESG performance itself.

Alhady [15] examined the factors that influence the CoD among healthcare companies listed on the Indonesian stock market, analyzing data from 14 out of 24 healthcare groups. The study found that voluntary disclosure and an independent board of directors were inversely related to the CoD, meaning that higher levels of these factors were associated with a lower CoD. Conversely, the research indicated that the CoD was not significantly affected by executive ownership, institutional ownership, or the size of the company.

As stakeholders increasingly prioritize environmental issues, environmental information disclosure has become a vital tool for companies to showcase their social responsibility. It also offers essential data for credit institutions to evaluate the risks linked to a company. In their study, Yang, Wen, et al. [16] employed a two-way fixed effects model and found that environmental disclosure can help lower the CoD for firms.

Numerous studies conducted globally indicate that a higher level of information disclosure correlates with a lower cost of capital for both debt and equity. This relationship will be a crucial point in the empirical investigation of this study, which focuses on the Vietnamese stock market.

3. METHODOLOGY

The study uses a mixed-method approach that combines both qualitative and quantitative research. The qualitative component involves creating a measurement framework for assessing levels of information disclosure. The quantitative component relies on secondary data collected from reputable and reliable sources, followed by regression analysis to identify correlations between the variables in the model.

The foundation of the model is the Information Disclosure measurement framework. While research on quantifying information disclosure levels has been conducted for some time [17], there remains a lack of standardization regarding the number of disclosure indicators that should be reported. This study builds on previous research and incorporates the Annual Report and Corporate Governance Report Evaluation Criteria, published

by HoSE, along with the evaluation criteria for the IR Awards 2024. Consequently, we have developed a comprehensive measurement framework that includes 118 points, covering both mandatory and voluntary disclosures. These points are organized into nine distinct information groups as follows:

Table 1. Information groups to be disclosed in this study

Indexes	Group	Max Point
I	Number of reports	4
II	The format of information disclosure	3
III	General information	6
IV	Information of firm's management and operation	38
V	Information about the stock trading activities of related parties	5
VI	Information of operation results	30
VII	Sustainability report	20
VIII	Information about risk management	8
IX	Information of independent audit	4

Source: The authors developed this table based on a synthesis of previous studies and the scoring criteria for annual financial reports and corporate governance reports published by HoSE.

The measurement method used is a non-weighted scoring system that compares the disclosed information items from four main reports: the Annual Financial Report, Financial Statement, Corporate Governance Report, and Statement of Changes in Equity. This assessment focuses on 74 listed companies in the Vietnamese stock market's VN100 index, excluding financial, banking, and insurance companies. Each disclosed information item is assigned 1 point, while an undisclosed item receives 0 points.

The formula to measure the level of information disclosure is as follows:

$$IDL_{i,j} = \frac{\sum_{k=1}^{n_{i,j}} d_{k,i,j}}{n_{i,j}}$$

Where: (i) k represents the index of the information item in the information disclosure level measurement table; (ii) $IDL_{i,j}$ denotes the information disclosure level of company i in year j, where i is part of the VN100 index (comprising 74 companies) and j spans the years 2019 to 2023; (iii) $n_{i,j}$ is the number of information items that company i could disclosure in year j, with $n \leq 118$; and (iv) $d_{i,j} = 1$ if information item k of company i is disclosed in year j and $d_{i,j} = 0$ if it is not disclosed.

Firm characteristics factor

This section discusses the main control variable group of the model. Based on the study by Saputra and Faizal [18], this paper adopts firm size and firm age as key control variables. Generally, larger firms and those with longer operating histories are more likely to experience a decrease in the CoD. This trend can be attributed to two factors: firstly, these firms typically have sufficient internal resources to repay loans; and secondly, they possess adequate financial resources to minimize reliance on external financing. When considering external financing, their primary concern is to evaluate it against the cost of equity capital. Specifically, if external financing is less expensive and does not increase agency costs, the BoM tends to prefer this option for funding. Consequently, Hypothesis 1 (H1) posits that firm size and firm age are inversely correlated with the CoD.

Financial characteristics factor

According to the study by Chen and Zhu [8], a firm's financial characteristics - specifically its growth rate (measured by revenue), profitability (measured by ROA), and financial leverage - exhibit an inverse relationship with the CoD. Signaling Theory [10] suggests that debt providers closely examine these factors. When they determine that a company is performing well, they perceive a lower risk associated with lending, which in turn reduces the CoD. This paper builds on that theory by using these financial characteristics as independent variables. Hypothesis 2 (H2) posits that when a company performs effectively, its CoD will decrease; conversely, as financial leverage increases, the CoD will rise to offset the heightened risk.

Audit firm

According to Sengupta [2], the involvement of large and reputable audit firms (the Big 4) in auditing a company's financial statements

improves the transparency of the results. As a result, Signaling Theory [10] suggests that debt providers are likely to lower the CoD when a company is audited by such firms. This also forms the research hypothesis of this paper (H3).

Financial distress prediction index

In Vietnam, there have been limited studies linking the financial distress prediction index (z-score) to the CoD. However, based on the research by Chen and Zhu [8], it is suggested that when the financial distress index indicates a potential bankruptcy for a firm, the CoD tends to increase. This is to account for the risks that funding providers will face in the future. Therefore, this paper proposes the hypothesis that there is an inverse relationship between the financial distress prediction index and the CoD (H4).

The level of information disclosure

Numerous studies conducted worldwide have established a relationship between the level of information disclosure and the CoD. For example, Sengupta [2] demonstrated that high-quality and timely information disclosure can reduce risk assessments made by lenders and underwriters, which, in turn, lowers the CoD. While various studies indicate that disclosure across different aspects can decrease the cost of capital, both debt and equity, most global research primarily focuses on information related to environmental, social, and governance performance or environmental disclosures. However, there is still limited research on the impact of comprehensive information disclosure levels specifically on the CoD. In Vietnam, this topic has not been extensively studied, and existing research typically focuses on empirically testing the effects of ESG or environmental information disclosure on capital costs. Therefore, this paper builds upon previous research by measuring the impact of comprehensive information levels on the CoD. The proposed hypothesis is that as a firm increases its level of disclosure, its CoD will decrease (H5). This is the main and the most important hypothesis of this study.

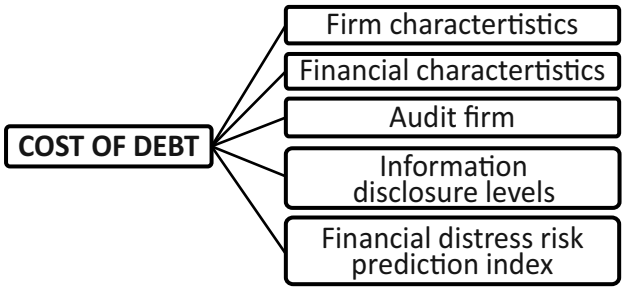

Figure 1. Research framework

Source: The authors build upon theoretical foundations regarding the factors influencing the CoD.

The research model is constructed as follows, based on the perspective of Sengupta [2] and Nandi and Ghosh [17]:

$$COD_{i,t} = \beta_0 + \beta_1 FS_{i,t} + \beta_2 OY_{i,t} + \beta_3 SGR_{i,t} + \beta_4 ROA_{i,t} + \beta_5 FL_{i,t} + \beta_6 AF_{i,t} + \beta_7 AZ_{i,t} + \beta_8 IDL_{i,t} + \beta_9 C19 + \varepsilon_{i,t}$$

Table 2. Explanations for the notations in the research model

Notation	Description
i	Represents the observation unit. In this study, it is the enterprise represented by its stock code.
t	Represents the observation period. In this study, it refers to the research years from 2019 to 2023.
β_0	The intercept of the model, a constant representing the dependent variable when all independent variables have a value of zero.
β_1 -> β_9	Regression coefficients of the independent and control variables in the model.
ε	Random error term of the model.
IDL	The information disclosure levels.
FS	Firm size.
OY	Operating years.
SGR	Sales growth rates.
ROA	Return on Assets.
AF	Audit firms, a binary variable, equals 1 if the financial statements are audited by a Big4 audit firm, 0 otherwise.
AZ	Financial distress risk prediction index [5].
C19	Dummy variable equals 1 for the Covid-19 pandemic years (2020, 2021) and 0 for the remaining years.
COD	The cost of debt.

Source: The authors provide a consolidated explanation of the notations use in the research model.

The measurement methods for the variables in the research model are described as follows:

Variables	Signal	Measurement method	Research related
Firm size	FS	Natural logarithm of total assets	[18]
Operating years	OY	Natural logarithm of (Year of observation - Year of establishment)	[2]
Sale growth rate	SGR	= (Actual net revenue of the observation year - Actual net revenue of the previous year) / Actual net revenue of the previous year	[8]
Return on Assets	ROA	= Earning after tax / Total assets	[18]
Audit firm	AF	Dummy variable, = 1 if audited by Big4, = 0 if not.	[2]
Financial distress risk prediction index	AZ	Measured by the z-score model for public companies. Dummy variable, = 1 when the company is in the distress zone, = 0 when the company is in the warning zone or the safe zone.	[5]
Information disclosure level	IDL	Measured by the 118-point information disclosure index	[17]
Cost of Debt	COD	= Interest expenses / Average total debt	[18]

Source: The authors synthesis from previous studies related

The z-score model employed in this study is a financial distress measurement developed from prior research, designed to accurately predict outcomes for most industries and public companies, as proposed by Altman and Hotchkiss [5]. The formula is as follows:

$$z\text{ - }score = 3.25 + 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$$

The z-score is a tool used to evaluate a firm's financial safety, with three main thresholds: (i) If the z-score exceeds 5.85, the company is considered to be in a safe condition with no risk of bankruptcy; (ii) If the z-score falls between 4.35 and 5.85, the company enters a warning zone and may be at risk of bankruptcy; (iii) If the z-score is 4.35 or lower, the company is regarded as being in the danger zone, indicating a very high risk of bankruptcy.

4. RESULTS AND DISCUSSIONS

4.1. Results

As of December 31, 2023, Vietnam had a total of 698 companies listed on its two stock exchanges, the Hanoi Stock Exchange (HNX) and the Ho Chi Minh Stock Exchange (HoSE). These companies, alongside securities firms and fund management companies, constitute the VN-Index, also known as the VN Allshare Index. HoSE has developed the VN100 index based on international standards and FTSE 100 criteria. This VN100 index consists of two groups of stocks: VN30 and VN Midcap, which together represent 100 stocks with the largest market capitalization, high liquidity, and a significant free-float ratio. The index provides a more accurate reflection of market movements and represents the 100 largest enterprises in Vietnam. The VN100 index portfolio was chosen as the sample for this study because it includes stocks whose market capitalization accounts for up to 90% of the overall market. At certain times, these stocks also make up 80% of total market transactions. However, due to differences in capital structures and operational methods, companies from the financial sector - such as banks, financial companies, and insurance firms - were excluded from the data sample.

The research data were collected over a five-year period (2019 - 2023), resulting in a total of 370 observations. The formula for determining the sample size for multiple regression is $n \geq 8m + 50$ [19], where n represents the number of observations and m denotes the number of variables. After excluding samples with insufficient observational data, a total of 368 eligible observations remains, with this sample size, this study ensures that the conditions for performing regression estimations are adequately met.

Table 4. Variables descriptive statistic

Variables	Number of observations	Mean	Standard Deviation	Min	Max
Information disclosure level	368	0.6718	0.0792	0.5082	0.8689
Firm size	368	30.3773	1.1306	27.7017	34.1348
Operating year	368	2.7191	0.3497	0	3.4012
Audit firm	368	0.7337	0.4426	0	1
Sale growth rate	368	0.2035	0.8515	-0.7762	10.8377
ROA	368	0.0722	0.0723	-0.0640	0.4679
Financial leverage	368	0.2381	0.1494	0	0.7156
Z-score	368	0.8750	0.3312	0	1
Cost of Debt	368	0.0603	0.0828	0	1.2884

Source: The authors compiled and analyzed the data using Stata software, version 17

According to Table 4, the average disclosure score of the enterprises in the research sample is 82 out of a possible 118 points, which is equivalent to 69.49%. The lowest recorded score is 62 points, representing 52.54% of the total potential disclosure score, while the highest score is 106 points, corresponding to 89.83%. Specifically, the enterprise with the lowest disclosure score is GVR in 2019, whereas the highest scores were achieved by PAN in 2021, 2022, and 2023. The data indicates that company size and years of operation demonstrate a moderate standard deviation, suggesting similarities among the enterprises within the VN100 index. Furthermore, the majority of enterprises in the VN100 index engage Big 4 auditing firms, with an average proportion of 73.37%.

The research sample included two years that coincided with the global economic downturn caused by the COVID-19 pandemic, which resulted in significant variability in revenue growth. The average growth rate was 20.35%, with a standard deviation of 0.8515. In contrast, ROA showed greater stability; it had a standard deviation of 0.0723. The average ROA for the enterprises in the research sample was 7.22%.

On average, the enterprises in the research sample have a financial leverage ratio of 23.81%, with a standard deviation of 0.1494. This indicates a significant variation in capital structures among the enterprises. The CoD within the VN100 portfolio also shows considerable variation, with an average of 6.03% and a standard deviation of 0.0828.

The research model utilizes the Generalized Method of Moments (GMM) estimation approach to address the issue of endogeneity. This method can be divided into two types: static GMM and dynamic GMM. To determine whether the static or dynamic GMM approach is more suitable, it is important to examine the first-order lag of the dependent variable [20], which in this case is the CoD, and assess its correlation.

The test for the first-order lag of the coefficient of the CoD indicates a correlation coefficient of 0.1716, with a p-value of 0.011, which is below the significance level of $\alpha = 0.05$. This suggests that the first-order lag of the CoD is significantly correlated with the CoD itself. Furthermore, according to Sengupta [2], the CoD in the current year is influenced by the information disclosure level of the previous year. Therefore, when included in the regression model, the disclosure level variable should be transformed into its first-order lag.

Table 5. Results of the dynamic Generalized Method of Moments estimation

Variables	Coefficient	Standard Deviation	p-value
The first-order lag of the CoD	0.1347	0.0078	0.000
The first-order lag of the information disclosure level	0.0515	0.0106	0.000
Firm size	0.0064	0.0012	0.000
Audit firm	-0.0131	0.0036	0.000
Sale growth rate	0.0025	0.0015	0.089
z-score indicator	0.0110	0.0045	0.015
ROA	-0.2018	0.0151	0.000
Financial leverage	-0.0776	0.0087	0.000

Variables	Coefficient	Standard Deviation	p-value
Operating year	0.0078	0.0018	0.000
The impact of Covid-19 pandemic	-0.0053	0.0012	0.000
Intercept coefficient	-0.1620	0.0384	0.000
Number of observations	294		
Number of instruments	54		
Number of groups	74		
Prob > chi2	0.000		
Arellano-Bond test for AR(1) in first differences	0.328		
Arellano-Bond test for AR(2) in first differences	0.793		
Hansen test of overid. restriction	0.323		

Source: The authors compiled the results from the regression analysis using the GMM model with the support of Stata 17 software

The model includes 54 instruments, which is fewer than the 74 groups, suggesting that the model is not at risk of overfitting. The results of the chi-squared test indicate that Prob > chi2 = 0.000, which is less than the significance level of $\alpha = 0.05$. This finding confirms that the dGMM estimation method is appropriate.

Additionally, the Arellano-Bond test for first-order autocorrelation produced a p-value of Pr > z = 0.328, which exceeds $\alpha = 0.05$, indicating that there are no issues with first-order autocorrelation. The test for higher-order autocorrelation yielded a p-value of Pr > z = 0.793, also greater than $\alpha = 0.05$, further confirming that autocorrelation is not a concern.

4.2. Discussion

The CoD for a company is influenced by various factors outlined in the study; however, the direction of their impact differs from the initial research hypotheses. The regression results support the research hypotheses for certain factors, including audit firms, profitability, financial distress forecasts, and the effects of the COVID-19 pandemic. This indicates that financial transparency, as represented by audit firms, and operational efficiency, as measured by ROA, help reduce perceived risks by lenders, leading to a lower CoD. During the COVID-19 pandemic, the CoD also decreased to support and stimulate company recovery.

Furthermore, consistent with the findings of Chen and Zhu [8], when a company is projected to experience financial distress, resulting in an increased bankruptcy risk, the CoD rises correspondingly to compensate for these risks. Therefore, hypotheses H3 and H4 are accepted. In contrast, for hypothesis H2, which includes three factors - growth rate, ROA, and financial leverage - only ROA aligns with the research hypothesis.

The remaining factors are all positively correlated with the CoD. Company characteristics, specifically two control factors - size and years of operation - also show a positive correlation with CoD. This suggests that a company with a longer operational history and a larger size tends to have more complex operations, which in turn increases overall risk. Consequently, the CoD adjusts to compensate for this heightened risk. Therefore, we reject hypothesis H1.

The last two factors under financial characteristics, growth rate and financial leverage, produce results that contradict the research hypothesis. The growth rate positively affects the CoD, indicating that while a company may experience revenue growth, this does not guarantee the efficient use of internal resources, which can lead to an increase in the CoD. On the other hand, an increase in financial leverage leads to a slight decrease in the CoD. This implies that when a company has established a reputation in the capital market, higher financial leverage can reduce the CoD. This finding is consistent with the static trade-off theory and the pecking order theory, especially during periods of high capital costs.

The research findings indicate a positive correlation between the CoD and the level of information disclosure, particularly concerning disclosures made in the previous period. This supports Signaling Theory, which suggests that disclosures from firms considered ineffective by lenders lead to an increase in the CoD. However, this increase does not extend to the current financial year. The results

from the GMM model do not support the perspective of Sengupta [2] and Nandi and Ghosh [17]. Instead, increasing information disclosure appears to raise the CoD. This issue arises when transparency or the quality of disclosed information is low, leading capital providers to require additional compensation for the increased risk. Consequently, hypothesis H5 is rejected.

5. CONCLUSION

The research findings identify various factors that can both increase and decrease the CoD. This indicates that the BoM need to carefully consider these aspects to effectively manage the CoD. Based on these findings, the authors emphasize several key points for companies and stakeholders to focus on:

- Enhancing financial transparency: Companies should engage reputable audit firms and provide accurate and timely financial disclosures. This builds trust with lenders and can ultimately reduce the CoD.
- Optimizing operation efficiency: Improve the effective use of resources, ensures that growth is aligned with profitability, which can contribute to a lower CoD.
- Proactive risk management: Organizations should regularly monitor indicators of financial distress to anticipate risks and implement measures that minimize credit risk and borrowing costs.
- Strategic use of leverage: Leverage should be optimized to achieve a balanced capital structure that aligns with market conditions and the firm's long-term financial strategy.

Future research:

- Expanding the sample size: This study utilized a total of 368 data samples, which is sufficient for quantitative research models. However, given the overall economy, this sample size is not comprehensive enough to capture general market fluctuations. Future studies could enhance the sample size by including firms from the Mid Cap and Small Cap groups or even the entire Vietnamese stock market.
- Exploring additional factors: Future research could consider factors not included in this study, such as board members' characteristics, macroeconomic variables, or other alternative financial distress prediction models.
- Weighted scoring approaches: While this study employed an objective methodology, future research could incorporate weighted scoring systems that prioritize the information categories most relevant to investors and lenders.
- Measuring disclosure quality: It is essential to develop metrics to assess the quality of disclosed information. Some disclosures may be superficial and lack meaningful content. Future studies should focus on evaluating the actual quality and implications of the information disclosed.

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Chi phí sử dụng nợ: Bằng chứng mới về mối liên hệ với mức độ công bố thông tin

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TÓM TẮT

Nghiên cứu này xem xét các yếu tố ảnh hưởng đến chi phí sử dụng nợ (CoD) của các công ty niêm yết trên thị trường chứng khoán Việt Nam, với trọng tâm đặc biệt là mức độ công bố thông tin và các chỉ số dự báo rủi ro tài chính. Mẫu nghiên cứu bao gồm các công ty thuộc chỉ số VN100, đại diện cho 100 cổ phiếu có giá trị vốn hóa và tính thanh khoản cao nhất tại Việt Nam. Dữ liệu được thu thập từ báo cáo tài chính đã kiểm toán và báo cáo thường niên được công bố trong giai đoạn 2019 - 2023. Nghiên cứu sử dụng phương pháp hồi quy đa biến để phân tích mối quan hệ giữa CoD và các biến giải thích khác nhau, bao gồm các đặc điểm riêng của doanh nghiệp (như quy mô, khả năng sinh lời và cấu trúc quản trị), các chỉ số rủi ro tài chính (ví dụ như Z-score của Altman) và mức độ công bố thông tin. Kết quả nghiên cứu chỉ ra rằng có mối tương quan có ý nghĩa thống kê giữa mức độ công bố thông tin, chỉ số dự báo rủi ro tài chính và chi phí sử dụng nợ. Cụ thể, các công ty có mức độ công bố thông tin cao hơn lại có xu hướng phải chịu chi phí sử dụng nợ cao hơn. Kết quả tưởng chừng mâu thuẫn này cho thấy rằng các doanh nghiệp có thể công bố thông tin chi tiết hơn khi họ đang gặp khó khăn về tài chính hoặc khi cố gắng thể hiện tính minh bạch nhằm trấn an các chủ nợ, điều này vô tình làm tăng nhận thức về rủi ro từ phía các tổ chức cho vay.

***Từ khóa**: chi phí sử dụng nợ, mức độ công bố thông tin, chỉ số z-score*

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