Title: **The interplay of financial report complexity: assessing its influence on debt financing and share price**

Nafees Reza
School of Business and Entrepreneurship, Independent University, Bangladesh

Maqbool Kader Quraishi. PhD
School of Business and Entrepreneurship, Independent University, Bangladesh

Corresponding author email address: quraishmk@iub.edu.bd

The interplay of financial report complexity: assessing its influence on debt financing and share price

Abstract

Recent studies indicate that financial reports have become increasingly lengthy and complex. This complexity may pose challenges for individual investors, who might struggle to interpret these intricate annual reports effectively. However, banks have a distinct advantage, as they can access private information about borrowing companies. In Bangladesh's rapidly expanding corporate sector, where firms frequently seek financing through equity and debt, understanding the impact of financial statement complexity is crucial. This study aims to explore how the intricate nature of financial reports influences both the bank loan dependency and share prices. The analysis focuses on fifty companies listed on the Dhaka Stock Exchange (DSE) over the period from 2013 to 2023. Data on financial statements and debt financing are collected from annual reports, with complexity assessed based on two parameters: the length and readability of the financial statements. The results suggest a correlation where increased complexity in financial statements tends to lead to a greater reliance on bank loans. However, the complexity of financial statements appears to have no significant impact on investors' behavior, as reflected in the return estimates. This study contributes to the existing literature by providing further evidence on the financial report complexity of Bangladeshi listed companies and its impact on bank loan dependency and share prices.

Keywords: Financial report complexity, share price, debt financing, Bangladesh

Introduction

In recent years, financial statements have become increasingly complex due to a combination of factors that have transformed financial reporting. One of the primary drivers of this complexity is the evolution of accounting standards. Regulatory bodies such as the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) continuously update and refine these standards to enhance the accuracy and relevance of financial information. This has resulted in more rigorous reporting requirements, compelling companies to provide detailed disclosures about their financial activities. Additionally, companies are now required to disclose more information about their risk management practices and the potential impact of economic uncertainties on their financial well-being. This includes providing detailed assessments of risks such as market volatility, regulatory changes, and geopolitical events. As companies expand their operations globally, they encounter a diverse array of accounting standards, tax laws, and regulatory requirements across different jurisdictions, adding layers of complexity to their financial statements. Moreover, stakeholders, including investors, regulators, and the public—demand greater transparency and access to comprehensive information. This increased demand has led to a shift towards more detailed financial disclosures. Investors seek insights into a company's financial health, operational performance, and strategic direction, which necessitates more extensive reporting on key metrics and indicators.

In Bangladesh, the capital markets are relatively young and evolving, and financial literacy is generally low. This combination makes it challenging for many stakeholders to comprehend overly complex financial statements. Analyzing the complexity of these reports can help determine their accessibility to the average reader, which is crucial for facilitating informed financial decisions. Additionally, since banks possess distinct capabilities in gathering and analyzing information, companies with complex financial statements may be more inclined to rely on bank debt as a source of financing.

In this study, we examine the two attributes of annual report complexity: length and readability. Length is measured as the number of words in the company’s annual report, and readability is measured using Bog index. Our findings reveal that larger companies tend to produce more complex financial reports, likely due to their extensive operations and more intricate financial structures. In contrast, the textile industry stands out for producing reports that are more readable, possibly reflecting the industry's efforts to ensure transparency and accessibility for stakeholders. Furthermore, we observe a significant link between report readability and higher dependency on bank debt, suggesting that complex reports may induce companies to access credit from financial institutions. However, neither report complexity nor length appears to have a direct impact on abnormal returns. This indicates that investors may not place substantial weight on the complexity or clarity of reports when making investment decisions, focusing instead on other factors such as firm performance or market conditions.

The structure of the paper is as follows. Section 2 examines the influence of financial report complexity on debt financing and share price, drawing on recent research. Hypotheses are also presented in this section. In Section 4, we outline the characteristics of the data and detail the empirical model used in

the analysis. Section 5 presents all the empirical results and their interpretations. Lastly, Section 6 provides the study's conclusion.

Literature Review

The SEC believes that everyone deserves fair treatment and access to essential information about investments and the individuals selling them. Companies that offer securities to the public are required to report truthfully about their business, the securities they are offering, and any associated investment risks (SEC, 2023). The Securities and Exchange Commission (SEC) has consistently worked to enhance the readability of public companies' financial documents. The SEC's "A Plain English Handbook: How to Create Clear SEC Disclosure Documents" was designed to help companies draft their financial documents in a way that is easily understandable to the average investor. The handbook emphasizes the use of simple, straightforward language, active voice, and logical organization. It encourages the elimination of legal jargon and complex sentence structures, aiming to improve transparency and investor comprehension. The ultimate goal is to ensure that all investors, regardless of their financial literacy, can make informed decisions based on clear and accessible information (SEC, 1998).

In line with the SEC's emphasis on transparency, investors now have greater access to more extensive data from longer public filings. Between 2004 and 2010, total disclosure increased by about 16 percent, while footnote disclosure expanded by 28 percent. This indicates that footnote disclosure grew more rapidly than overall disclosure, with notable increases in areas such as pension and post-retirement benefits, fair value, financial derivatives, and hedging (KPMG, 2011). However, this trend may not necessarily benefit investors if extracting valuable information from larger and more complex reports becomes more costly. The increased volume and diversity of accounting information intensify the cognitive effort required by investors to process financial reports. As a result, when task complexity increases, decision-making ability tends to decline (Bonner, 1994). People's cognitive capacity is inherently limited, with the ability to keep only about four things in their minds at once (Bushee et al., 2018). These costs involved in extracting useful data from public data can prevent markets from fully reflecting the significance of those data (Bloomfield, 2002). It is widely acknowledged that as information processing costs rise, the precision of investors' forecasts of future cash flow tends to decline (Grossman & Stiglitz, 1980). Consequently, investors rely more on analyst services for firms with complex financial statements. While analyst reports for these firms provide valuable insights, earnings forecasts often exhibit greater variation among analysts. Analysts' earnings are less accurate, and are associated with higher levels of uncertainty (Lehavy et al., 2011).

The relationship between regulatory requirements and readability is complex. For example, Richards & Van Staden (2015) examined the impact of readability on International Financial Reporting Standards (IFRS). They conducted their study on NZX50-listed companies, collecting data both before and after IFRS was implemented in New Zealand. Their findings concluded that the adoption of IFRS degraded

the readability of annual reports, reports became significantly longer and more complex, with an increased use of tables.

Regulators and policymakers have increasingly recognized the growing complexity of financial reporting (SEC, 2008). This complexity arises from the expanding scope of business operations, advancements in technology, and evolving financial instruments, all of which contribute to the intricate nature of financial disclosures. According to Baudot et al. (2018) firms define complexity across three primary dimensions: multiplicity, diversity, and interrelatedness. The multiplicity dimension highlights the features of accounting standards that influence the number of accounting elements and options available. Diversity refers to how consistently accounting elements are treated across different standards. Lastly, interrelatedness reflects the degree to which accounting elements are used for different purposes or functions. Apart from the influence of regulatory requirements on readability, board independence also plays a significant role in shaping the clarity of annual reports. Rahman & Kabir (2024) explored whether greater board independence improves readability, given its fundamental role in facilitating effective communication with stakeholders. Drawing on 11,938 firm-year observations from 1997 to 2016, the findings indicated a negative correlation between higher board independence and annual report readability. The study also examined cross-sectional variations, showing that although managerial ability and regulatory measures such as the SEC's Plain English Rule of 1998 enhance readability, the negative effect of board independence remains. Moreover, factors like directors' tenure and CEO duality weaken this relationship, while extended CEO tenure amplifies it.

According to Li (2008), firms with poor performance often produce annual reports that are more difficult to read. In contrast, companies with more readable reports tend to show more consistent profits over the next one to four years. Changes in report readability have an impact on profit persistence similar to that of accruals, implying that managers might strategically adjust readability to obscure negative information from investors. Similarly, Asay et al. (2018) finds that bad news disclosures are less readable than good news due to managers' self-enhancement motives, focusing on future projections and explanations rather than intentionally obscuring poor performance. Following this, Lo et al. (2017) find a general positive relationship between financial performance and readability; however, this pattern changes when firms meet or slightly exceed prior earnings benchmarks. The impact becomes more pronounced among groups of firms within this range of earnings performance that are more likely to have used accruals to manipulate earnings. This finding implies that increased report complexity is often associated with efforts to conceal financial performance. The evidence contradicts the assumption that good performance is naturally easier to communicate than poor performance and instead supports the idea that intentional obfuscation contributes to reduced report readability. This aligns with the notion that dishonesty is more cognitively demanding than truthfulness, as earnings management creates conflicting thoughts and ethical stress for managers, which can impact report readability.

Another aspect to consider, when a firm has a complex financial statement, its can become intricate and challenging to interpret. This complexity can significantly influence the company's share price. The relationship between annual report readability and the cost of equity capital has been explored extensively in prior studies. Rjiba et al. (2021) examined the impact using U.S. public firm data. They

find that complex reports hinder investors' ability to handle and understand reports. Moreover, the adverse effect of complex annual reports on equity financing costs intensifies when the disclosure tone is more negative or ambiguous. Additional factors such as stock market competition, institutional ownership levels, and analyst coverage further moderate this relationship, highlighting the broader implications of textual clarity for firms operating in different market contexts.

A group of scholars, Abernathy et al., (2019), investigated the impact of financial statement readability on the likelihood of financial misstatements, analyzing a sample of 45,922 firm-year observations. They measured footnote readability based on length, common words, and financial terminology. Their results suggest that companies with low footnote readability are more likely to have financial misstatements. Additionally, they explored the impact of readability on litigation risks, finding some evidence that low footnote readability is associated with higher litigation risks. Possibly, management may intentionally be less transparent when a company is underperforming, obscuring negative information through less clear reports. By increasing the effort required to understand bad news, managers hope to delay or mitigate its impact on the stock price (Bloomfield, 2002). These findings align with the incomplete revelation hypothesis, which suggests that information that is difficult to analyze may not be fully reflected in market prices. This intentional lack of transparency may contribute to both financial misstatements and increased litigation risks. According to You & Zhang, (2009), investors are more likely to underreact to firms with complex 10-K reports, whereas firms with simpler 10-K filings experience little market underreaction. Overall trading decreases when company reports are complicated and hard to understand, primarily because smaller investors trade less frequently (Miller, 2010). Moreover, firms with poor readability in their financial disclosures tend to trade at substantial discounts relative to their underlying fundamentals (Hwang & Kim, 2017). Obscuring financial reports also raises the likelihood of a stock price crash, further exacerbating the financial risks for these firms (Kong et al., 2021; Yin et al., 2022). This suggests that simplifying 10-K information could help investors better incorporate it into prices. This is supported by Lawrence (2013), who finds that investors generally prefer to invest in companies that are transparent about their finances, favoring clear and easy-to-understand financial reports. This preference is particularly strong among individual investors compared to large investment firms. Overconfident investors, however, tend to place less importance on detailed financial information.

The significance of the annual report readability is debatable. Investors already have access to other information sources, such as financial analyst reports. If these alternative sources complement or substitute for annual reports, then readability of annual reports may not be as important. Some critics argue that disclosures should primarily cater to sophisticated investors due to the complexity of financial information. Finally, if investors are knowledgeable and can understand intricate reports, the stock price may not be affected by the complexity of the language or format (Firtel, 1998). Accordingly, we formulate the following hypothesis.

***H1**: Higher complexity in financial reports significantly affects abnormal returns.*

If firms have complex financial statements, they might find it harder to manage finances. Even it limits the access to trade credit, especially for firms with minimal global presence and those with less influence in their respective product markets (H.-Q. Li et al., 2024). In crowdfunding, lenders are more competitive in their bids, more willing to fund, and offer reduced interest rates to online borrowers who present well-written, positive content with minimal indications of dishonesty (Gao et al., 2023). One option they could consider is securing debt financing. Banks hold a significant advantage in forming relationships with firms due to their ability to gain deeper insights during the lending process. Research and evidence suggest that banks are particularly skilled at gathering and interpreting information because they have access to private details about the companies they lend to (Rajan, 1992; Sharpe, 1990). Banks function as specialized agents in the acquisition and dissemination of information, playing a crucial role in identifying and managing risk among potential borrowers. Acting like a Bayesian statistician, a bank continuously refines its subjective estimation of default rates, thereby enhancing its ability to identify risky loan applicants (Amano, 1999). Banks diligently assess potential borrowers and maintain rigorous oversight. They accumulate in-depth, specialized knowledge about their clients. This informational advantage enables banks to negotiate tailored debt structures and implement effective monitoring systems, overcoming challenges faced by other lenders. One of the primary tools banks use in this process is collateral, which serves as a screening device to differentiate between high-risk and low-risk firms, a strategy that is particularly effective when there is a significant proportion of each type in the market (Mattesini, 1990). Additionally, banks screen borrowers to categorize them according to their risk profiles and monitor their actions, ensuring that they align with the terms of their loans. These activities are central to the bank's function in maintaining the stability and profitability of its lending operations (Stiglitz & Weiss, 1988).

As a result, when a firm's financial statements become more complex, bank financing can be more appealing than other external financing options, assuming other factors remain constant. This strategy, however, often comes at a cost to companies. This is because banks may excel at handling complex information, they also incur costs associated with processing it, which potentially influence the terms and conditions of loan agreements (Nini et al., 2012). Companies may have to relinquish certain decision rights and often facing the looming threat of loan acceleration (Chava & Roberts, 2008). A study delved deeper into the interplay between the cost of debt, and auditor report readability. Low readability in annual reports heightens the information risk perceived by creditors, resulting in increased external financing costs. Beyond readability, the unclear tone of these reports is strongly linked to managers' tendency to conceal information, which leads to less favorable loan conditions. Specifically, a higher proportion of uncertain and weak modal language in business disclosures is associated with wider loan spreads and a greater likelihood of security requirements (Ertugrul et al., 2017). For innovative firms, readable financial disclosure can ease lender monitoring. This could potentially result in reduced borrowing costs (Hoffmann & Kleimeier, 2021). Furthermore, firms with more readable CSR reports benefit from lower bank loan costs, indicating that banks view them as having a lower default risk (Yu & Garg, 2022). Nonetheless, bank financing can be attractive to complex firms as long as the costs associated with other financing mechanisms are higher.

H2: *Higher complexity in financial reports significantly affects bank debt dependency.*

Methodology

To do this study, we have selected fifty listed companies from Dhaka Stock Exchange, covering the period from 2013 to 2023. These companies represent six different industries, chosen to explore how industry-specific factors influence financial statement complexity, debt financing, and share prices. Regarding debt financing, our rationale is that the level of dependency on debt may vary across industries, with financial statement complexity potentially affecting this dependency. Concerning share prices, in industries with simpler financial reporting, investors may find it easier to evaluate a company's performance, resulting in different pricing dynamics compared to industries with more complex reports.

For this research, we have collected company-specific information, including bank debt, total debt, total assets, sales, EBIT, and the number of outstanding shares from the respective annual reports. We obtained the share price and volume data for all listed companies from a website called AmarStock.com. After that, we aim to explore the determinants of annual report complexity, recognizing that various factors can influence this complexity. Initially, we consider the size of the company, which we measure using the logarithm of market capitalization. A larger company typically has a more complex organizational structure, resulting in more detailed reporting and complex financial statements. Additionally, total assets are considered, as firms with substantial assets often engage in varied operational activities, necessitating comprehensive disclosures to reflect their financial health accurately. Moreover, EBIT plays a crucial role, as firms with higher EBIT are often associated with diverse revenue streams, operations, or complex product lines. The industry in which a firm operates also significantly impacts report complexity. Different industries have distinct regulatory requirements, financial practices, and reporting standards, which can contribute to the overall intricacy of annual reports. For instance, firms in highly regulated sectors, such as pharmaceuticals, may face stricter reporting obligations than those in less regulated industries, leading to greater complexity in their financial disclosures.

$$Readability_t^i = \alpha_i + \beta_1 size_t^i + \beta_2 total\ assets_t^i + \beta_3 EBIT_t^i + \delta_1 industry_i + \varepsilon_t^i \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Here, we assess the annual report readability ($Readability_t^i$) through Bog index, as presented by Bonsall IV et al. (2017). Many readability studies use the Gunning (1952) Fog Index as a readability measure for financial reports. This index captures two general attributes of plain English - average sentence length and the percentage of words containing three or more syllables. However, Loughran & McDonald (2014) criticized the Fog Index's complex word component, arguing that it oversimplifies word complexity by labeling any word with three or more syllables as complex, including easily understood terms like "Company." To overcome the shortcomings of the Fog Index, we use the Bog Index. This index is based on the plain English writing standards and aligns closely with most of the SEC's guidelines for transparent communication with investors. The Bog index evaluates specific features emphasized in the SEC Plain English Handbook, such as average sentence length, passive

sentences, abstract words, overused words, misused words, and jargon. This index is developed through StyleWriter software. Unlike the Fog Index, which considers any word with three or more syllables complex, the Bog Index assesses word complexity based on familiarity, drawing from a proprietary list of over 200,000 words. This approach provides a better way to measure readability by focusing on actual word complexity, not just syllable counts, fixing a major issue with the Fog Index.

We measure the size of the company ($size_t^i$) as the logarithm of market capitalization. Total assets ($total\ assets_t^i$) represent the company's entire asset base at time t, while EBIT ($EBIT_t^i$) denotes earnings before interest and taxes, providing an indicator of the company's operating profitability. We introduce a set of industry dummy variables ($industry_i$) to account for the six different industries represented in the data. Each dummy variable takes a value of 1 if the company belongs to the respective industry and 0 otherwise. By including these industry dummies, we control sector-specific effects, allowing a more accurate assessment of the impact of other variables on our outcome. ε_t^i captures the movements that are not explained by the equation. This model helps identify what affects annual report readability, so we can control these factors in future models.

Following the first analysis, we want to assess whether firms with complex and lengthy annual reports have a larger proportion of bank loans. We model the bank debt dependency as a function of readability, length and control variables: company size, total assets and industry dummy.

$$Bank\ Debt\ Dependency_t^i = \alpha_i + \beta_1 Readability_t^i + \beta_2 Length_t^i + \beta_2 Controls_t^i + \varepsilon_t^i \text{.....(2)}$$

We measure the $Bank\ Debt\ Dependency_t^i$ by dividing its total bank debt by its total assets. Dividing by total assets provides a consistent basis for comparison across companies and industries, regardless of their total debt levels. If bank debt were scaled only by total debt, companies with low total debt could show a skewed proportion, potentially distorting comparisons and misrepresenting the role of bank debt in their capital structure. Annual report length ($Length_t^i$) is measured by taking the natural logarithm of the total word count in a company's report.

In addition to analyzing bank debt dependency, we also examine the impact of readability on share price. Here, we use abnormal return instead of share price. This is because abnormal returns focus on the portion of stock returns that deviate from what is expected based on market performance and other benchmarks, allowing us to isolate the effect of annual report readability and length on investor reactions more effectively. Our econometric model for abnormal return includes readability and length as key variables, along with control variables such as company size, total assets, and industry dummies to ensure robustness.

$$Abnormal\ Return_t^i = \alpha_i + \beta_1 Readability_t^i + \beta_2 Length_t^i + \beta_2 Controls_t^i + \varepsilon_t^i \text{.....(3)}$$

The abnormal return ($Abnormal\ Return_t^i$) is calculated using the Capital Asset Pricing Model (CAPM). According to CAPM, the expected return on a stock is determined by its sensitivity to market risk, represented by beta, and the risk-free rate. An abnormal return is derived by subtracting the expected return, calculated from CAPM, from the actual return observed for each company over the year. This

approach isolates the portion of return that deviates from what CAPM predicts, allowing us to analyze whether readability influences these deviations in the return beyond the effects captured by market risk factors.

Data Analysis

Descriptive Statistics

Table 01 states the summary statistics of our key variables. The statistics reveals significant variability and skewness across the variables, especially in Bank debt, and Market capitalization, where values show strong right skewness and high kurtosis. For example, the average bank debt is 7.785 billion, ranging up to 406.2 billion, with a standard deviation of 30 billion. This variability, combined with a skewness of 8.839 and kurtosis of 96.45, indicates that while most companies have relatively low bank debt, a few companies hold substantially higher levels. Bank Debt Percentage also has a moderate right skew (2.989), meaning some firms have very high proportions of bank debt to assets, though the average is 30%. Similarly, Market capitalization has the highest skewness (10.701) and kurtosis (130.598), suggesting that a few companies dominate in market capitalization, while others are much smaller. Therefore, we applied a log transformation to market capitalization to reduce skewness and normalize the distribution.

Table 01: Descriptive Statistics

	Bank debt	Bank Debt Percentage	Total word	Bog Index	Market capitalization
Mean	7.79E+09	0.3	47523.574	76.56048	7.77E+10
min	0	0	754	46	1.12E+08
max	4.06E+11	2.649	495162	125	6.75E+12
Std. Dev.	3.00E+10	0.321	48775.705	12.52087	4.91E+11
skewness	8.839	2.989	4.252	0.931113	10.701
kurtosis	96.45	18.785	29.619	4.058332	130.598
N	496	496	495	496	494

On the other hand, Bog Index, which measures readability, is nearly symmetric (skewness = 0.93) with a kurtosis of 4.058, showing a relatively heavier tails. Total word—the word count in reports—shows a strong right skew (4.252) and high kurtosis (29.619), indicating that while most reports are within a standard range, a few are exceptionally long. Overall, these descriptive statistics highlight the diversity in financial parameters and readability among companies.

Determinants of annual report complexity

The analysis examines factors influencing the Bog Index (table: 02), a measure of annual report readability, and reveals that company size, as indicated by Total Assets, is a key determinant of

readability. The coefficient for Log of Market Capitalization (-0.286) shows a negative relationship with the Bog Index score. However, this relationship is statistically insignificant. Total Assets have a positive, statistically significant effect (p = 0.06), indicating that companies with larger asset bases tend to have higher readability scores. EBIT (Earnings Before Interest and Taxes), although positive, does not significantly impact readability (p = 0.954). Among the industry dummies, the coefficient for the Textile industry is -8.9407, which indicates that, on average, the readability score for firms in textile industry is 8.94 points lower than the readability score for firms in the cement industry. Since a lower readability score indicates more readability, this suggests that firms in the textile industry have more readable reports compared to firms in the cement industry.

Table 02: Impact of company-specific factors on readability

Bog Index	Coef.	Std. Err.	p-value	[95% Conf Interval]		Sig
Log of MC	-0.286	0.72	0.691	-1.697	1.124	
Total asset	3.14e-11	1.67e-11	0.060	-1.33e-12	6.42E-11	*
EBIT	1.30E-10	2.23E-10	0.954	-4.24E-10	4.50E-10	
Industry						
Engineering	-3.99	4.93	.418	-13.653	5.673	
Food	-5.845	4.941	.237	-15.529	3.838	
Fuel and Power	-4.977	4.961	.316	-14.701	4.747	
Pharmaceuticals & Chemicals	-7.152	4.908	.145	-16.772	2.467	
Textile	-8.941	5.151	.083	-19.036	1.154	*
Constant	87.799	16.924	0	54.628	120.97	***

*** p<.01, ** p<.05, * p<.1

Impact of annual report readability and length on Bank debt dependency

Table 03 illustrates the impact of annual report readability and length on Bank Debt Percentage, which measures bank debt scaled by total assets. The results indicate that the Bog Index—a measure of readability—has a positive coefficient of 0.003, suggesting that less readable reports are associated with higher bank debt dependency, with this relationship being statistically significant at the 1% level.

Table 03: Impact of annual report readability and length on Bank debt dependency

Bank Debt %	Coef.	Std. Err.	p-value	[95% Conf	Interval]	Sig
Bog Index	0.003	0.001	0	0.001	0.005	***
Total word	3.78E-07	2.30E-07	0.1	-7.28E-08	8.28E-07	
Control Variables						
Sales	2.91E-13	5.01E-13	0.562	-6.92E-13	1.27E-12	
Total asset	7.70E-13	3.36E-13	0.022	1.11E-13	1.43E-12	**
Log of MC	-0.072	0.015	0	-0.101	-0.043	***
Industry						
Engineering	-0.08	0.144	0.577	-0.364	0.203	
Food	0.021	0.145	0.887	-0.263	0.304	
Fuel and Power	-0.059	0.145	0.687	-0.343	0.226	

Pharmaceuticals & Chemicals	-0.07	0.144	0.626	-0.352	0.212	
Textile	-0.109	0.15	0.468	-0.402	0.185	
Constant	1.715	0.366	0	0.998	2.431	***

*** p<.01, ** p<.05, * p<.1

Additionally, the Total word variable, length of annual report, indicates a statistically insignificant effect. Conversely, control variable, sales show no significant relationship with bank debt, indicating that sales do not directly affect a firm's reliance on bank debt. The coefficient for Total assets is positive and statistically significant at the 5% level, implying that larger companies tend to have a higher proportion of bank debt in their capital structure. In contrast, the Log of MC (log of market capitalization) shows a significant negative relationship with bank debt dependency, indicating that firms with higher market values are less reliant on bank debt.

Table 04: Impact of annual report readability and length on Abnormal return

Abnormal return	Coef.	Std. Err.	p-value	[95% Conf	Interval]	Sig
Bog Index	-0.0002	0.001	0.849	-0.003	0.003	
Total word	-3.21E-07	3.89E-07	0.41	-1.08E-06	4.42E-07	
Control Variables						
Sales	-1.55E-12	6.21E-13	0.012	-2.77E-12	-3.35E-13	**
Total asset	-2.07E-13	4.51E-13	0.647	-1.09E-12	6.78E-13	
Log of MC	0.034	0.016	0.031	0.003	0.065	**
Industry						
Engineering	0.019	0.068	0.784	-0.114	0.152	
Food	0.15	0.07	0.031	0.013	0.287	**
Fuel and Power	-0.042	0.07	0.548	-0.18	0.096	
Pharmaceuticals & Chemicals	0.113	0.067	0.092	-0.019	0.244	*
Textile	0.027	0.074	0.71	-0.117	0.172	
Constant	-0.75	0.389	0.054	-1.513	0.012	*

*** p<.01, ** p<.05, * p<.1

Subsequently, we further examined the impact of readability and report length on abnormal returns (Equation 03 and Table 4). Unlike the findings for bank debt dependency, there is no statistically significant relationship between abnormal returns and readability. Similarly, report length does not significantly impact abnormal returns. Among the control variables, Sales show a significant negative association with abnormal returns, suggesting that higher sales might slightly reduce abnormal returns, though the effect size is minimal. The Food and Pharmaceuticals & Chemicals sector have a positive coefficient (0.15), suggesting that companies in these sectors experience higher abnormal returns compared to the reference group.

Conclusion

The objective of our study is to investigate the impact of readability and length on bank debt dependency and share price, which is measured by abnormal return. Our findings indicate that company size, measured by total assets, significantly influences the readability of annual reports. Specifically, larger

firms tend to produce reports with lower readability, as indicated by the positive relationship between Total Assets with the Bog Index. This suggests that complexity in reporting increases as firms grow in size. When examining the relationship between annual report readability, length, and bank debt dependency, we find that less readable reports are associated with higher bank debt dependency. The Bog Index positively correlates with bank debt dependency, with statistical significance at the 1% level, indicating that firms with more complex reports rely more on bank debt. However, when analyzing the impact on abnormal returns, neither readability nor report length showed a statistically significant effect. This suggests that investors may not react directly to the complexity or length of annual reports in terms of abnormal returns.

Overall, our findings explain the significance of report readability in determining capital structure choices, particularly in bank debt dependency. These insights contribute to understanding how corporate reporting practices and firm characteristics affect financing behavior, with potential implications for firms aiming to optimize their capital structure through transparency and readability.

References

Abernathy, J. L., Guo, F., Kubick, T. R., & Masli, A. (2019). Financial statement footnote readability and corporate audit outcomes. *Auditing: A Journal of Practice & Theory*, *38*(2), 1–26.

Amano, M. (1999). Credit rationing of a Bayesian bank with simple screening technologies. *Japan and the World Economy*, *11*(4), 545–556.

Asay, H. S., Libby, R., & Rennekamp, K. (2018). Firm performance, reporting goals, and language choices in narrative disclosures. *Journal of Accounting and Economics*, *65*(2–3), 380–398.

Baudot, L., Demek, K. C., & Huang, Z. (2018). The accounting profession's engagement with accounting standards: Conceptualizing accounting complexity through Big 4 comment letters. *Auditing: A Journal of Practice & Theory*, *37*(2), 175–196.

Bloomfield, R. J. (2002). *The'incomplete revelation hypothesis' and financial reporting*.

Bonner, S. E. (1994). A model of the effects of audit task complexity. *Accounting, Organizations and Society*, *19*(3), 213–234.

Bonsall IV, S. B., Leone, A. J., Miller, B. P., & Rennekamp, K. (2017). A plain English measure of financial reporting readability. *Journal of Accounting and Economics*, *63*(2–3), 329–357.

Bushee, B. J., Gow, I. D., & Taylor, D. J. (2018). Linguistic complexity in firm disclosures: Obfuscation or information? *Journal of Accounting Research*, *56*(1), 85–121.

Chava, S., & Roberts, M. R. (2008). How does financing impact investment? The role of debt covenants. *The Journal of Finance*, *63*(5), 2085–2121.

Ertugrul, M., Lei, J., Qiu, J., & Wan, C. (2017). Annual report readability, tone ambiguity, and the cost of borrowing. *Journal of Financial and Quantitative Analysis*, *52*(2), 811–836.

Firtel, K. B. (1998). Plain English: A reappraisal of the intended audience of disclosure under the Securities Act of 1933. *S. Cal. L. Rev.*, *72*, 851.

Gao, Q., Lin, M., & Sias, R. (2023). Words matter: The role of readability, tone, and deception cues in online credit markets. *Journal of Financial and Quantitative Analysis*, *58*(1), 1–28.

Grossman, S. J., & Stiglitz, J. E. (1980). On the impossibility of informationally efficient markets. *The American Economic Review*, *70*(3), 393–408.

Gunning, R. (1952). *The technique of clear writing*. McGraw-Hill.

Hoffmann, A. O. I., & Kleimeier, S. (2021). Financial disclosure readability and innovative firms' cost of debt. *International Review of Finance*, *21*(2), 699–713.

Hwang, B.-H., & Kim, H. H. (2017). It pays to write well. *Journal of Financial Economics*, *124*(2), 373–394.

Kong, D., Shi, L., & Zhang, F. (2021). Explain or conceal? Causal language intensity in annual report and stock price crash risk. *Economic Modelling*, *94*, 715–725.

KPMG. (2011). *Disclosure overload and complexity: Hidden in plain sight*.

Lawrence, A. (2013). Individual investors and financial disclosure. *Journal of Accounting and Economics*, *56*(1), 130–147.

Lehavy, R., Li, F., & Merkley, K. (2011). The effect of annual report readability on analyst following and the properties of their earnings forecasts. *The Accounting Review*, *86*(3), 1087–1115.

Li, F. (2008). Annual report readability, current earnings, and earnings persistence. *Journal of Accounting and Economics*, *45*(2–3), 221–247.

Li, H.-Q., Yang, Y., Xue, F.-W., & Liu, Z.-Y. (2024). Annual report readability and trade credit financing: Evidence from China. *Research in International Business and Finance*, *69*, 102220.

Lo, K., Ramos, F., & Rogo, R. (2017). Earnings management and annual report readability. *Journal of Accounting and Economics*, *63*(1), 1–25.

Loughran, T., & McDonald, B. (2014). Measuring readability in financial disclosures. *The Journal of Finance*, *69*(4), 1643–1671.

Mattesini, F. (1990). Screening in the credit market: The role of collateral. *European Journal of Political Economy*, *6*(1), 1–22. https://doi.org/10.1016/0176-2680(90)90033-F

Miller, B. P. (2010). The effects of reporting complexity on small and large investor trading. *The Accounting Review*, *85*(6), 2107–2143.

Nini, G., Smith, D. C., & Sufi, A. (2012). Creditor control rights, corporate governance, and firm value. *The Review of Financial Studies*, *25*(6), 1713–1761.

Rahman, D., & Kabir, M. (2024). Does board independence influence annual report readability? *European Accounting Review*, *33*(5), 1923–1950.

Rajan, R. G. (1992). Insiders and outsiders: The choice between informed and arm's-length debt. *The Journal of Finance*, *47*(4), 1367–1400.

Richards, G., & Van Staden, C. (2015). The readability impact of international financial reporting standards. *Pacific Accounting Review*, *27*(3), 282–303.

Rjiba, H., Saadi, S., Boubaker, S., & Ding, X. S. (2021). Annual report readability and the cost of equity capital. *Journal of Corporate Finance*, *67*, 101902.

SEC. (1998). A Plain English Handbook. *The English Journal*, *62*(1), 158. https://doi.org/10.2307/814113

SEC. (2008). *Final report of the advisory committee on improvements to financial reporting to the United States securities and Exchange commission*. http://www.sec.gov/about/offices/oca/acifr/acifr-

finalreport.pdf

SEC. (2023, August 9). *Protecting Investors*. https://www.sec.gov/about/mission

Sharpe, S. A. (1990). Asymmetric information, bank lending, and implicit contracts: A stylized model of customer relationships. *The Journal of Finance*, *45*(4), 1069–1087.

Stiglitz, J. E., & Weiss, A. (1988). *Banks as social accountants and screening devices for the allocation of credit*. National Bureau of Economic Research Cambridge, Mass., USA.

Yin, S., Chevapatrakul, T., & Yao, K. (2022). The causal effect of improved readability of financial reporting on stock price crash risk: Evidence from the Plain Writing Act of 2010. *Economics Letters*, *216*, 110614.

You, H., & Zhang, X. (2009). Financial reporting complexity and investor underreaction to 10-K information. *Review of Accounting Studies*, *14*, 559–586.

Yu, K., & Garg, P. (2022). Corporate social responsibility report readability, credit ratings and cost of borrowing. *Review of Accounting and Finance*, *21*(5), 423–448.