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Trade Credit to Improve Financial Performance of Industry in Indonesia

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ABSTRACT

This research investigates the role of credit sales as an effective strategy for enhancing financial performance. The study aims to assess the impact of credit sales on financial outcomes, employing panel data regression with a fixed effect model as the analytical method. The results indicate that credit sales have a positive and statistically significant influence on the financial performance of companies. Specifically, firms with higher levels of credit sales show a significant effect on Return on Assets (ROA), while those with lower levels of credit sales demonstrate a notable impact on Return on Equity (ROE). Additionally, the study reveals that bank loans and financial risk significantly attenuate the relationship between credit sales and financial performance. These findings provide valuable insights for managers in formulating credit sales strategies to enhance financial performance. Furthermore, the research contributes to the advancement of knowledge in financial management, offering a reference point for future studies in the field.

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Introduction

Credit sales are a strategic approach to enhancing sales, offering companies an effective solution to optimize their supply chain [1] Credit sales alleviate capital constraints for purchasers by allowing them to defer payments [2]. [3] findings highlight a positive and

significant relationship between trade credit and increased sales and profitability in Indian firms. Trade credit benefits both upstream and downstream business partners [4]. In companies that engage in credit sales, the stability of the supply chain is maintained when businesses within the network successfully increase trade credit flows, thereby enhancing customer relationships. [5] found that companies in Korea that depend on trade credit perform better during economic crises. Moreover, [6] noted that most companies in the United Kingdom and the United States offer products through trade credit as a means to stimulate sales and reduce inventory levels.

Bank debt is a primary solution for addressing corporate capital demands and boosting sales performance [7]. Compared to other funding methods such as stocks or bonds, bank loans offer different advantages, making them a preferred option for many enterprises in Indonesia. However, despite its benefits, bank debt involves the necessity of recurring interest payments, independent of the company's profitability [8], [9]. Consequently, while bank loans offer necessary money, they also entail financial constraints that must be carefully managed by firms. Financial risk management is crucial in the context of credit sales, as this strategy entails the risk of default, which can stem from imbalances in cash flow due to customers' inability to meet payment obligations. This default risk leads to an accumulation of accounts receivable, negatively affecting the company’s financial performance [10], [11]. Firms that heavily rely on credit sales must enforce strict financial discipline to maintain healthy cash flow. Effective financial risk management is essential to ensure the company operates efficiently and mitigates potential disruptions [12].

However, several studies present contrasting findings. [13] highlight that credit sales can lead to higher costs, potentially reducing profitability. Additionally, credit sales often require greater working capital to support increased sales. [14] notes that a company's decision to engage in credit sales carries the risk of default or financial loss [15]. A study in Turkey by Kadırgan and Özlü (2023) found that firms facing financial constraints, particularly from banks, had limited access to credit trading, exacerbated by tightening global liquidity conditions [16]. Moreover, credit trading may elevate the risk of financial

distress, increase leverage, and result in higher operational costs [10]. This research is critically important, as studies on credit sales have predominantly been conducted in developed countries, with limited focus on developing nations. Credit sales serve as a key marketing strategy aimed at boosting revenue, yet there remains a gap in understanding its impact in less-studied regions. This study seeks to expand upon the work of [7], which primarily focused on the effects of credit sales, bank loans, and liquidity on small businesses. By incorporating financial risk and exploring its effect on financial performance, this research addresses a significant gap. The issue of credit sales is closely linked to financial risk, which must be carefully managed, as well as the effectiveness of bank debt as a funding alternative in enhancing financial performance. Therefore, this research is to answer the following questions: How is the relationship between trade credit and financial performance? Can bank loans and financial risk moderate the effect of trade credit on financial performance in companies in Indonesia?The objective of this study is to evaluate the impact of credit sales on financial performance within Indonesia's industrial sector. The novelty of this research lies in the use of moderation variables—namely bank loans and financial risk—to assess their influence on the relationship between credit sales and financial performance.

Trade Credit and Financial Performance

The findings of [17] indicate that credit purchases can assist retailers in improving liquidity, thereby facilitating increased purchases. Similarly, [18] suggest that credit sales can strengthen relationships with suppliers, enabling businesses to optimize their sales processes. However, this study also notes that tightened or shortened credit terms can negatively affect sales [19]. In the long run, small firms finance approximately 4%–6% of tangible fixed asset purchases and 5%–10% of intangible fixed asset purchases through trade credit [20]. Furthermore, trade credit has been shown to enhance company profitability, as optimal trade credit balances the associated costs and benefits to maximize profitability [21]. According to [20], nearly 23% of ICT company sales were conducted on credit between 2011 and 2018, indicating that expanding credit-based sales can generate increased revenue.

Furthermore, [20] identified a non-linear relationship between income levels and credit sales, suggesting that credit trading offers mutual benefits to both retailers and suppliers. [22] also confirmed that credit sales positively and significantly impact company profitability, as supported by [23]. [21] found that credit sales have a positive and significant effect on the sustainable growth of Chinese companies, particularly those with strong internal control systems. Private companies, whose growth often depends on credit sales, benefited more from these transactions compared to state-owned enterprises. Additionally, credit sales were linked to stronger sustained growth in regions with limited access to credit. [14] emphasized that company growth is instrumental in establishing trade credit (TC) contracts, which in turn increases the supply of trade credit. Growing companies also show greater commitment from sellers to maintain business relationships. In financially distressed firms, reliance on credit sales from suppliers becomes crucial to sustaining growth [24]. Exporting companies show a higher dependence on credit sales, leading to more significant sales growth [5]. Furthermore, Lawrenz and Oberndorfer (2018) observed that trade credit impacts sales more in small firms, while larger companies tend to have greater bargaining power in credit sales. However, Harris et al. (2019) identified a negative relationship between credit sales and the cash flow of small firms, particularly those with limited access to external capital sources. [25] , [21] further demonstrated that the liquidity impact of credit sales is more pronounced in smaller firms. Credit sales can substantially lower inventory storage costs, thereby stimulating production by using the point of sale as additional inventory for manufacturing companies [20]. However, liquidity considerations can negatively influence inventory decisions, as reduced inventory levels may result in fewer products sold, subsequently diminishing profitability [26]. Shipping inventory also incurs significant costs, particularly for large companies that maintain substantial inventory levels to ensure smooth production cycles, necessitating substantial expenditures to encourage customers to make regular payments [27]. In contrast, small businesses often prioritize the quick collection of accounts receivable to minimize costs and maintain the sustainability of their inventory for future sales [14].

Bank Loan

According to [7], bank loan debt and trade credit are crucial financing sources for startups, significantly impacting company operations. Trade credit positively influences bank loans for companies with high agency costs, reinforcing the signaling role of trade credit [7] [28] [29]. Mature companies are more likely to rely on bank loans compared to younger firms when facing liquidity challenges [7]. In contrast, [30] found that bank debt is lower in certain companies, indicating a substitution effect between bank credit and trade credit during periods of uncertainty. Conversely, [5] observed that companies heavily dependent on bank credit often experience slower sales growth, while [31] found that bank debt does not significantly impact company value. Instead, long-term determinants of a company's value include debt ratios, asset tangibility, and liquidity.

Financial Risk Trade Credit Financial Performance

According to [10], reductions in credit sales are observed in companies with higher distress risk, financial constraints, and operating leverage [24]. Research by [24] on trade credit in China reveals that companies with limited liquidity heavily depend on suppliers to support growth. Strict credit provision is implemented for companies at higher risk of distress and financial constraints [10]. [32] found that, during periods of economic uncertainty, companies shorten receivables and debt periods from suppliers to enhance performance. Conversely, [33] noted that credit trading increases during crises. [33] observed that firms with high liquidity before a crisis expanded credit trading, positively affecting performance. [34] found no evidence of liquidity redistribution among large firms, which resulted in reduced trade credit for small firms vulnerable to crises. [14] reported that increasing trade credit financing is common in slow-moving economies and during crises. The Edward Z-score method, developed by Altman [35]; [36], is used to measure financial risk and predict bankruptcy by analyzing a weighted set of financial ratios to generate an overall score.

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Hypothesis Development

Trade credit is the most important part in increasing sales, so that the company's profits can increase, we predict that the trade credit strategy has a positive impact on financial performance. The influence of trade credit on financial performance is explained by market power theory in previous studies [37]. Companies with high market power can rely more on expanding trade credit because they can handle imperfections and uncertainties related to financial markets. Trade credit is considered as one of the sales strategies where customers are given flexibility in payments to increase sales. Therefore, the opinion of market power can support trade credit for credit expansion and increase sales to customers. Trade credit is also seen as a resource that can be utilized by companies to improve financial performance. Companies can reduce working capital needs, improve liquidity and strengthen financial positions in the short term. Credit sales are one of the strategies in increasing the company's revenue so that it has an impact on the company's performance, with the company increasing sales on credit, the company's profit will increase. In this study we hypothesize that trade credit has a positive impact on financial performance.

Financial performance serves as a primary indicator reflecting the outcomes of all operational activities at a business location, influencing the entity's financial status [38]. [3] identified several company-specific financial variables—such as sales growth, short-term liabilities, internal finances, and gross profit margins—as significant determinants of performance for Indian companies. Company-specific factors including size, growth, profitability, and leverage also impact the efficiency of working capital management [39]. [5] found that companies with limited credit sales generally experience poorer financial performance. In contrast, companies that utilize credit sales tend to outperform those relying primarily on bank credit .

According to [20] trade credit has been shown to enhance company profitability, as optimal trade credit balances the associated costs and benefits to maximize profitability [40]. Furthermore [5] Companies that rely on credit sales have better performance. [22] also confirmed that credit sales positively and significantly impact company profitability, as

supported by [23]. The size of trade credit can determine the performance of the company, so in this study we develop the following hypotheses:

H1 : Trade Credit has a positive and significant effect on financial performance

Bank debt plays a very important role in corporate capital funding, especially in companies that implement the Trade Credit Strategy and require capital to increase sales. According to the agency cost theory [41], companies that have more bank loans will face low agency cost problems. Suppliers can have a lot of information about the company's trading activities, so that companies can apply for loans to suppliers to finance purchases at lower costs. In addition, companies use trade credit to reduce payment costs for each purchase of goods. We predict that bank debt will be able to moderate the relationship between credit sales and financial performance. Companies in meeting their capital needs often use bank debt as an alternative funding to increase sales. The results of the study [3] found a positive and significant relationship of trade on credit in increasing sales and profitability. Trade on credit is more profitable both upstream and downstream for business partners [42]. In companies that sell on credit, the supply chain remains stable when companies in the network are able to increase trade credit flows and to increase the value of relationships with customers [5].

Furthermore [18] credit sales can strengthen relationships with suppliers so that they can optimize sales. [20] Trade credit can increase the profitability of the company. Optimal trade credit can balance costs and benefits to maximize profitability [21]. Mature companies are more likely to utilize bank loans than younger firms when facing liquidity shortages [7]. However, [30] observed that bank debt tends to be lower in companies, indicating a substitution effect between bank credit and trade credit during periods of uncertainty. Conversely, [5] found that companies with a greater reliance on bank credit often experience slower sales growth.

H2: Bank loans are able to moderate the relationship between credit sales and financial performance.

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We predict the application of the credit sales strategy as sales optimization in increasing the company's revenue has considerable financial risks because it requires a very large amount of liquidity because it can trigger a default. If a company has good risk management and is able to identify, evaluate, and manage risks associated with credit sales, then its performance can remain stable even though credit sales increase. Conversely, if financial risks are not managed well, credit sales can become a burden and reduce the company's financial performance.The higher the financial risk of a company, the lower the financial performance.

Credit trading, however, can introduce risks such as financial distress, constraints, increased leverage, and higher operating costs [10], also observed a reduction in credit sales among companies with higher risks of distress, financial constraints, and operating leverage. Research by [24] on trade credit in China revealed that companies with limited liquidity heavily depend on suppliers to support their growth. Companies that do not have adequate risk controls tend to experience declining performance when credit sales increase, due to high levels of receivables and defaults. We hypothesize that finansial risk is able to moderate the relationship between credit sales and financial performance.

H3 : Financial Risk is able to moderate the relationship between credit sales and financial performance

Method

Data Sample

This research examined companies listed on the Indonesia Stock Exchange from 2016 to 2023. The study utilized data on sales accounts receivable ratio (SAR), Return on Equity (ROE), Return on Assets (ROA), firm size, days in inventory, net profit, bank loans, and the Z-score. Data were sourced from the OSIRIS website database. The study aims to analyze the impact of credit sales on the performance of companies within three industrial sectors in Indonesia, with a particular focus on those using bank loan capital as an alternative

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financing source. Additionally, the research explored how financial risk influences the relationship between credit sales and financial performance. The reason researchers took several different Company sectors in Indonesia is because each business sector has different strategies and behaviors in increasing sales.

Empirical Model Test

This study conducted 5 tests of panel data regression models with a fixed effect model [43], which tested the impact of credit sales on financial performance moderated by bank loans and financial risks. In addition, classical assumption tests and robustness tests were also carried out to see the robustness of the model that had been made, in this study STATA software was used to test the impact of credit sales on financial performance. To test the effect of SAR on Financial Performance, the Fix Securities panel data regression is used with the following equation:

H1; Model 1 : That SAR variables have an influence on financial performance

$$FP_{i,t} = \beta 0 + \beta 1\ SAR_{i,t} + \beta 2\ Firm\ Size_{i,t} + \beta 3\ LEVERAGE_{i,t} + \beta 4 CR_{i,t} + \beta 5\ DII_{i,t} + \beta 6 GROWTH\_NP + e_{i,t} \quad (1)$$

H2; Model 2: *SAR*Bank Loan moderating trade credit and Financial Performance*

$$FP_{i,t} = \beta 0 + \beta 1\ SAR * BLi_{,t} + \beta 2\ SAR + \beta 3\ BLi_{,t} + \beta 4 FRi_{,t} + \beta 5\ Firm\ Size_{i,t} + \beta 6 LEVERAGE_{i,t} + \beta 7 CR_{i,t} + \beta 8 DII_{i,t} + \beta 9 GROWTH\_NP + e_{i,t} \quad (2)$$

H3; Model 3: *SAR*Financial Risk moderating trade credit and Financial performance*

$$FP_{i,t} = \beta 0 + \beta 1\ SAR * FRi_{,t} + \beta 2\ SAR + \beta 3\ BLi_{,t} + \beta 4 FRi_{,t} + \beta 5\ Firm\ Size_{i,t} + \beta 6 LEVERAGE_{i,t} + \beta 7 CR_{i,t} + \beta 8 DII_{i,t} + \beta 9 GROWTH\_NP + e_{i,t} \quad (3)$$

Variable Measurement

This study was used to measure the impact of credit sales as measured by sales account receivable (SAR), which is the ratio of receivables divided by sales revenue [17] [44]. Meanwhile, financial performance is measured using ROA. And ROE [45] The use of

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ROA and ROE in measuring financial performance is very appropriate because ROA and ROE are the rate of return on invested investments and measure how much assets can create profits for the company. The control variables used are company characteristics such as firm size, leverage (LEV), Growth Net Profit (Growth NP), Day In Inventory (DII), Current Ratio (CR)[39]. Furthermore, for the moderation variable, namely bank loans where bank loans are used to measure the effectiveness of the use of bank debt capital in financing the company, then the moderation of Financial Risk in this case is measured using the Z Score, this model is very appropriate to measure financial risk because it uses the five-ratio approach in predicting the company's financial risk. . I. Altman in [46], [36].

Results and Discussion

Data Analysis

The model appropriateness test in panel data regression is employed to assess the adequacy of the model chosen. Table 1 presents the results of the Chow test and Hausman test for the dependent variables Return on Assets (ROA) and Return on Equity (ROE), with each test producing a p-value of less than 0.05. Consequently, the Fixed Effect Model is judged the proper choice for this investigation ([43].

Table 1. Model Appropriateness Test in Panel Data Regression

Summary of the Panel Diagnostic Tests			
Tests	Null hypothesis (H0)	P-Value	Recommended model
Chow test	Pooled Ordinary least squares model is better than Fix Effect Model	ROA=0.000 ROE=0.000	Fix Effect Model
Hausman Test	Fix Effect Model better than Random Effect Model	ROA =0.000 ROE=0.005	Fix Effect Model

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The research was conducted on three sectors of companies listed on the Indonesia Stock Exchange: Basic Materials, Industrial, and Consumer Non-Cyclical. The study covers the period from 2016 to 2023, involving a total of 1,123 company samples. The distribution of the research samples is detailed as follows:

Table 2. Sample distribution

No	Sector	N	%
1	Basic Materials	449	40
2	Industrial	254	22.6
3	Consumer Non Cyclical	420	37.4
	Total	1123	100

Resources : Idx

From the table above the distribution of research samples, it can be seen that companies in the basic materials sector are 449 or 40% of the total sample. Industrial as much as 254 or 22.6% and Consumer Non-Cyclical as much as 420 or 37.4$ of the total sample. Furthermore, for statistical descriptiveness, you can see in table 4 Descriptive statistics.

Table 3. Descriptive statistics

	N	Mean	Median	SD	Min	Max
ROA	1123	4.225	3.590	8.721	-74.08	55.25
ROE	1123	8.509	7.630	38.873	-901.46	389.73
SAR	1123	11.48	7.340	12.573	1.01	89.56
Bank Loans	1123	1.105000000 00	11218110.6 32	3.341000000 00	0	3.674000000 000
SIZE	1123	21.748	21.586	1.737	17.555	26.747
LEV	1123	69.422	43.360	120.215	-645.33	995.53
CR	1123	2.415	1.620	2.8	.06	42.34
DII	1123	80.436	58.650	67.315	.02	406.99
GROWTH	1123	-4.462	-1.580	173.335	-960.09	989.42

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Table 3 presents the descriptive statistics for a sample of companies in Indonesia. The average Return on Assets (ROA) is 4.225, while the average Return on Equity (ROE)

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is 8.508. The Sales Account Receivable (SAR) has an average of 11.48. Bank loans average 1.105 million. Firm size (SIZE) has an average of 21,748, and the leverage ratio averages 69.422. The current ratio stands at 2.415, with days in inventory averaging 80.4 days. Finally, net profit has an average of -4.462.

Furthermore, Table 4 provides Pearson correlation coefficients to examine the relationships between the variables under study, including the correlation between Sales Account Receivable (SAR) and financial performance, as well as with other control variables. Pearson correlation helps to determine the direction of these relationships and is also useful for detecting potential auto correlation issues. The results presented in Table 4 indicate that the Pearson correlation values are low, suggesting that there are no significant auto correlation problems in this study.

Table 4. Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) ROA	1.000								
(2) SAR	0.004	1.000							
(3) SIZE	0.141	0.097	1.000						
(4) LEV	-0.175	0.013	0.032	1.000					
(5) CR	0.135	-0.067	-0.216	-0.221	1.000				
(6) DII	-0.153	-0.180	-0.172	0.048	0.012	1.000			
(7) GROWTH	0.098	-0.003	0.053	-0.028	-0.033	-0.058	1.000		
(8) Bank Loans	-0.021	0.013	0.530	0.098	-0.090	-0.121	0.015	1.000	
(9) RISK	0.543	-0.022	-0.129	-0.334	0.539	-0.180	0.028	-0.165	1.000

Notes: This table shows the results of the Pearson Correlation test.
Resources: Output of Stata 17

The sample includes 1123 observations from 2018 to 2022 with a significance level of 5%. To overcome the endogenity problem, a multicollinearity test was carried out where all variables had a VIF value below 10, then it can be stated that the model does not have a multicollinearity problem. Furthermore, for heteroscedasticity using generalized least square, homocedastic results are obtained so that there is no heteroscedasticity problem [43].

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Sales Account Receivable and Return On Asset

Table 5 displays the results of Model 1, which examines the effect of trade credit (Sales Account Receivable, SAR) on financial performance, as measured by Return on Assets (ROA) and Return on Equity (ROE). We hypothesize that SAR positively influences both ROA and ROE. The findings indicate a positive and significant relationship between SAR and ROA, with a coefficient of 0.061 and a significance level of 10%. Additionally, SAR shows a positive and significant effect on ROE, with a coefficient of 0.377 and a significance level of 5%.

Table 5. Trade Credit and Financial Performance

Variable	ROA	ROE
SAR	0.061*	0.377**
	(0.031)	(0.190)
SIZE	5.240***	12.341***
	(0.752)	-4.542
LEV	-0.003	-0.099***
	(0.002)	(0.011)
CR	0.052	-0.225
	(0.117)	(0.710)
DII	-0.037***	-0.016
	(0.006)	(0.036)
GROWTH	0.002*	0.013**
	(0.001)	(0.006)
Constant	-107.396***	-255.440***
R2	0.0318	0.0365
N	1123	1123
p-value	0.000	0.000

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Resources: Output of Stata 17

To assess the impact of credit sales on financial performance based on size categories, credit sales are categorized according to the median value of the Sales Account Receivable (SAR) variable. Credit sales with SAR values above the median are classified as "large credit sales," while those with SAR values below the median are classified as "small credit sales."

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Table 6. Trade Credit high-Low and Financial Performance

	High Trade Credit		Low Trade Credit	
Variable	**ROA**	**ROE**	**ROA**	**ROE**
SAR	0.121*	-0.018	0.045	0.641***
	(0.070)	(0.614)	(0.036)	(0.147)
SIZE	4.871**	33.353*	5.578***	6.600*
	(1.974)	(17.374)	(0.853)	(3.520)
LEV	0.002	-0.028	-0.008***	-0.128***
	(0.004)	(0.037)	(0.002)	(0.009)
CR	0.512	1.139	-0.064	-0.429
	(0.463)	(4.080)	(0.113)	(0.466)
DII	-0.044***	-0.008	-0.037***	-0.010
	(0.016)	(0.144)	(0.007)	(0.029)
GROWTH	0.002	0.019	0.001	0.009*
	(0.003)	(0.023)	(0.001)	(0.005)
Constant	-102.712**	-725.265*	-113.152***	-129.664*
	(43.134)	(379.693)	(18.498)	(76.313)
R2	0.0498	0.0096	0.0305	0.1479
N	324	324	799	799
p-value	0.002	0.582	0.000	0.000

Resources: Output of Stata 17

In the large credit sales category, credit sales significantly impact Return on Assets (ROA) with a significance level of 10%. Conversely, for companies in the small credit sales category, credit sales have a significant effect on Return on Equity (ROE) with a significance level of 1%. For large credit sales companies, a key advantage is their inventory turnover, as indicated by shorter days in inventory. In contrast, companies with low credit sales benefit from lower debt usage, which supports and optimizes their financial performance.

Trade credit, Bank Loan and Financial Performance

Table 7 presents the results of testing models 2 and 3, which examine the hypothesis that the interaction term of Sales Account Receivable (SAR) and Bank Loans (BL) has a negative coefficient with respect to Return on Assets (ROA) and Return on Equity (ROE). The analysis reveals that SAR*BL has a negative coefficient of -0.000 for ROA, with a

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significance level of 10%, indicating a significant negative effect. In contrast, the coefficient for ROE is also -0.000 but does not significantly impact ROE.

Tabel 7. Trade Credit, bank Loan, Financial Risk and Financial Performance

	Model 2		Model 3	
Variable	**ROA**	**ROE**	**ROA**	**ROE**
SAR*BL	-0.000*	-0.000		
	(0.000)	(0.000)		
			0.110***	0.837***
SAR*RISK			(0.036)	(0.236)
SAR	0.073**	0.435**	0.110***	0.837***
	(0.032)	(0.195)	(0.036)	(0.236)
SIZE	5.337***	12.205***	4.002***	9.881**
	(0.761)	-4.604	(0.686)	-4.533
LEV	-0.002	-0.099***	-0.001	-0.094***
	(0.002)	(0.011)	(0.002)	(0.011)
CR	0.064	-0.180	-0.699***	-1.461*
	(0.118)	(0.711)	(0.118)	(0.783)
DII	-0.037***	-0.017	-0.017***	0.023
	(0.006)	(0.036)	(0.006)	(0.037)
GROWTH	0.002*	0.013**	0.001	0.012*
	(0.001)	(0.006)	(0.001)	(0.006)
BL	0.000	0.000	2.916***	6.246***
	(0.000)	(0.000)	(0.214)	-1.416
Constant	-109.539***	-253.113**	-88.434***	-218.761**
	-16.530	-99.955	-14.843	-98.075
R2	0.0329	0.0371	0.2154	0.0690
N	1123	1123	1123	1123
p-value	0.000	0.000	0.000	0.000

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Resources: Output of Stata 17

Financial Risk, Trade Credit Financial Performance

Table 7 presents the results of testing models 4 and 5, which investigate the hypothesis that the interaction term of Sales Account Receivable (SAR) and Financial Risk (RISK) has a negative coefficient on financial performance. The analysis reveals that

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SAR*RISK has a negative coefficient of -0.031 for Return on Assets (ROA), with a significance level of 1%. Similarly, the coefficient for SAR*RISK with respect to Return on Equity (ROE) is -0.220, also significant at the 1% level. Table 8 presents the results of the robustness test to assess the reliability of the previously established model. This robustness test employs logistic regression to evaluate Return on Assets (ROA) and Return on Equity (ROE) using dummy variables. The results from the logistic regression analysis are consistent with the initial findings, indicating that credit sales have a significant impact on financial performance. Therefore, the results of this study are considered robust and reliable.

Table 8. Robustness Test

	Logistic Regression	
Variable	**ROA DUMMY**	**ROE DUMMY**
SAR	.113***	.071***
	(0.000)	(0.000)
SIZE	-.013	.071
	(0.787)	(0.109)
LEV	-.007***	-.004***
	(0.000)	(0.000)
CR	.066**	-.033
	(0.020)	(0.255
DII	-.006***	-.005***
	(0.000)	(0.000)
GROWTH	.002***	.002***
	(0.000)	(0.000)
Constant	-,383	-1.708*
	(0.716)	(0.081)
Pseudo r-squared	0.263	0.169
Chi-square	262.978	262.978

Resources: Output of Stata 17

Discussion

From the results of the study, it was found that credit sales have a significant effect on financial performance. These results align with [20], who reported a positive and significant relationship between trade credit and increased sales and profitability in Indian

companies [32]. Effective management of trade receivables can enhance company performance. Credit sales are also effective in stimulating consumer purchases, thereby positively impacting financial performance. Similarly, [5] found that companies reliant on trade credit performed better during crises. The sale of credit can generate company value by expanding market share, increasing revenue, and strengthening the company's competitive position [4][20]. The results of this study also found that bank loans can reduce the relationship between credit sales and financial performance. These findings support the hypothesis in Model 2, which suggests that bank loans can diminish the relationship between credit sales and financial performance. Specifically, the negative effect of SAR*BL on ROA is more pronounced in larger companies with lower days in inventory. This aligns with [5], who found that companies more reliant on bank credit often experience slower sales growth. The weakening effect of bank loans on the relationship between credit sales and financial performance is attributable to the interest costs associated with bank debt and the potential for distress due to cash flow imbalances resulting from credit sales activities.

This study found that financial risk reduces the relationship between trade credit and financial performance. The impact of SAR*RISK on financial performance is more pronounced in larger companies with lower leverage, lower current ratios, and fewer days in inventory. These findings are consistent with previous research by [10], [24], which indicate that trade credit can lead to increased risk of distress, financial constraints, leverage, and higher operating costs. The reduction in credit sales observed in companies with higher financial risk, constraints, and operating leverage negatively affects their financial performance. The limitations of this research are carried out in corporate companies that have large capital and a broad market, so it is hoped that future researchers will be able to take different objects such as small or micro-scale companies and so on so that they can further refine the results of this study.

Conclusion

This study investigates the impact of credit sales on company financial performance. The findings reveal that credit sales significantly enhance financial performance. Specifically, companies with high levels of credit sales demonstrate a significant positive impact on Return on Assets (ROA), while those with lower credit sales show a significant impact on Return on Equity (ROE). Additionally, the study finds that bank loans and financial risk significantly weaken the relationship between credit sales and financial performance. Credit sales are crucial for improving financial performance, as they can boost sales and profitability for companies. Credit trading proves beneficial both upstream and downstream within the supply chain. Companies that engage in credit sales can stabilize their supply chains, enhance trade credit flows, strengthen customer relationships, and reduce inventory levels. Consequently, increasing credit sales is associated with improved company performance.

The results of this study provide valuable insights for managers regarding credit sales strategies. Specifically, credit sales can expedite inventory turnover and enhance company profits. Improving credit sales is associated with better financial performance, making it a crucial factor for managers to consider when developing credit sales strategies. Additionally, the findings offer theoretical implications for understanding the interplay between credit sales, bank debt management, financial risk, company size, growth, income level, and financial performance. These insights contribute to the broader field of economics and can guide future research and practice. A limitation of this research is its focus on companies within the consumer cyclical and non-cyclical consumer sectors. Future research could address this gap by exploring additional sectors that have not been examined. This broader approach could potentially yield more comprehensive insights and enhance the overall findings of the study.

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